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Alcohol Intoxication, Self-Regulation, and Escalation of Aggression During Dating Conflict

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Alcohol Intoxication, Self-Regulation, and Escalation of Aggression During Dating Conflict

by

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Alcohol Intoxication, Self-Regulation, and Escalation of Aggression During Dating Conflict

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College-aged individuals experience verbal and physical dating aggression at high rates, which is troubling given the associated deleterious consequences. Verbal and physical aggression are highly correlated, with verbal aggression often serving as a precursor to physical aggression. The current studies examined factors that may influence the likelihood and escalation of dating aggression in response to a dating conflict scenario, including alcohol intoxication, self-regulation, and trait aggressivity. Study 1 assessed the construct validity of a newly developed audio-taped scenario of mutual aggression as well as a hot sauce task. Men and women with (n=31) and without (n=30) a history of past-year dating aggression provided responses to the conflict scenario using the Articulated Thoughts in Simulated Situations (ATSS) procedure. Under the guise of an assessment of sensitivity, participants allocated hot sauce for a fictitious participant to consume. Results supported the construct validity of the conflict scenario but not the hot sauce task, which was therefore not included in Study 2. Study 2

examined the influence of alcohol's pharmacological and expectancy effects as well as one's ability to self-regulate thoughts, feelings, and behavior on aggression intentions in response to the mutual aggression conflict scenario. Participants were randomized to either receive alcohol (n=48; blood alcohol content M = .082%), placebo (n=48), or no alcohol (n=48). Using ATSS procedures identical to Study 1, intoxicated individuals articulated more verbal aggression intentions overall and exhibited a greater increase across the conflict scenario than those who did not receive alcohol, but did not differ from those who received placebo. There were no effects of alcohol on physical aggression intentions. Individuals who received placebo and who were poorer at suppressing emotions articulated more verbal aggression intentions than intoxicated individuals. Additionally, individuals higher in trait aggressivity articulated more physical aggression intentions and intoxicated individuals with lower relationship satisfaction articulated more verbal aggression intentions. Results suggest that both the pharmacological and expectancy effects of alcohol were important to the occurrence of aggression. Whereas higher trait aggressivity and lower relationship satisfaction may be risk factors for aggression, regulating one's emotions may reduce the frequency of aggression.

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Chapter 1: Background and Introduction

Interpersonal aggression is not a recent phenomenon, however, continued empirical exploration is necessary to better understand the nature of aggression between intimate partners as well as the factors associated with its occurrence. In order to distinguish between different types of aggressive behaviors, *aggression* has been used to describe behavior intended to cause harm (either verbally or physically) to another individual, whereas *violence* refers to behaviors with the goal of extreme harm such as death (Anderson & Bushman, 2002). Although often referred to as intimate partner violence (IPV), I will refer to aggression toward an intimate partner as *partner* or *dating aggression* throughout, as the behaviors examined in the current studies are not associated with intent to cause extreme harm. Regardless of how these behaviors are defined, dating aggression is a public health concern due to the frequency with which it occurs as well as the associated negative consequences.

One in three college couples reported that at least one incident of aggression occurred during the course of their dating relationship (Jackson, 1999; Lewis & Fremouw, 2001). As many as 82% of dating partners reported verbal aggression (Shook, Gerrity, Jurich, & Segrist, 2000), sometimes referred to as psychological aggression, which refers to any direct or indirect non-physical act intended to upset a partner (Jenkins & Aubé, 2002). Physical aggression, in contrast, involves physically attacking a partner in order to cause harm to his or her body (Murphy & O'Leary, 1989), and was reported by 21% of dating partners surveyed about the past 12-months (Shook et al., 2000). The prevalence of partner aggression has been shown to increase dramatically between the ages of 15 and 25, reaching its peak between the ages of 20 and 25 (O'Leary, 1999).

Even though the frequency of partner aggression may decrease after the age of 25, large nationally representative surveys conclude that one in six married couples experience an incident of physical aggression each year (Schafer, Caetano, & Clark, 1998; Straus & Gelles, 1990).

The high rates of verbal and physical aggression are concerning because of the myriad of associated negative consequences which include physical injuries (American Medical Association, 1992), depression and anxiety (Amar & Gennaro, 2005; Cascardi, O'Leary, Lawrence, & Schlee, 1995), increased risk for substance use, unhealthy weight control behaviors, and suicidal ideation or suicide attempts (Silverman, Raj, Mucci, & Hathaway, 2001). Psychological aggression alone was associated with impaired physical health, and when there was a history of both psychological and physical aggression, women were more likely to use psychoactive drugs (Romito, Turan, & De Marchi, 2005).

Verbal and physical aggression are often highly correlated (Lundeberg, Stith, Penn, & Ward, 2004), as 94% of those who reported physical aggression also reported verbal aggression (Shook et al., 2000). One possible explanation for this relation is that the occurrence of verbal aggression over time may lead to minor acts of physical aggression (Murphy & O'Leary, 1989; Ryan, 1998), and then to more severe forms of physical aggression (O'Leary, 1993). A longitudinal investigation of self-reported verbal and physical aggression found that prior verbal aggression predicted future physical aggression for both husbands and wives (Schumacher & Leonard, 2005). Moreover, once physical aggression is established in a relationship it is likely to persist (O'Leary, 1999) and may even extend into future intimate and marital relationships (Roscoe, & Benaske, 1985).

Verbal aggression may also lead to the occurrence of physical aggression within a discrete incident or conflict (Sillars, Roberts, Dun, & Leonard, 2002). This escalation may contribute to a pattern of "common couple violence" (Johnson, 1995, p. 285) in which mild to moderately severe aggression is reciprocated by both partners (Johnson, 1995). These types of relationships are relatively common, with verbal aggression thought to precipitate and escalate to physical aggression during the conflict (Roberts, 2006). This may be the prevalent pattern for aggression among dating couples given that both men and women perpetrate aggression towards each other at approximately equal rates (Arias, Samios, & O'Leary, 1987; Hines & Saudino, 2003; Magdol, Moffitt, Caspi, Newman, Fagan, & Silva, 1997; Riggs, O'Leary, & Breslin, 1990; Straus & Sweet, 1992; White & Koss, 1991). Additionally, between one half and two-thirds of adolescents and young adults who reported dating aggression indicated that the aggression was mutual (Gray & Foshee, 1997; Whitaker, Haileyesus, Swahn, Saltzman, 2007).

A pattern of reciprocating aggression has been shown in laboratory investigations of communication between couples (e.g., Gottman, 1994; Margolin & Wampold, 1981), whereby negative behavior by one partner was responded to with additional negative behavior by the other partner. In couples with a history of physical aggression, negative reciprocations may escalate faster, with both partners more responsive to negative behaviors than couples without a history of physical aggression (Cordova, Jacobson, Gottman, Rushe, & Cox, 1993; Margolin, John, & Gleberman, 1988; Noller & Roberts, 2002). Whereas ethical concerns prevent this pattern of escalation from verbal to physical aggression to be studied within a laboratory setting, participants do verbalize statements reflecting physical aggression intentions during laboratory procedures (e.g.,

Eckhardt, 2007) suggesting the possibility of documenting the process of aggression escalation using behavioral intentions to hypothetical scenarios.

Alcohol Use and Aggression

Consumption of alcohol has been consistently related to interpersonal aggression, including partner aggression (for review, see Bushman & Cooper, 1990; Leonard & Quigley, 1999; Wells, Mihic, Tremblay, Graham, Demers, 2008). Laboratory studies assessing non-intimate interpersonal aggression often use the Taylor Aggression Paradigm (TAP) in which participants engage in a competitive task with a fictitious partner, and aggression is measured by the administration of electric shocks to that partner (Taylor, 1967). Findings have consistently shown that individuals who were administered alcohol responded more aggressively than individuals who received placebo or no alcohol (e.g., Chermack & Giancola, 1997; Taylor & Chermack, 1993).

Partner aggression has also been related to frequent heavy drinking and binge drinking (defined as four or more drinks per drinking occasion for women, and five or more drinks for men; Leonard & Quigley, 1999; Leonard & Senchak, 1993; Leonard & Senchak, 1996). Heavy alcohol use by the husband was predictive of aggression that occurred both prior to and one year after marriage. Alcohol use by the wife was also related to aggression, but only because it correlated with the husband's alcohol use (Leonard & Senchak, 1996). Moreover, one third of married couples' violent incidents involve alcohol (Caetano, Cunradi, Clark, & Shafer, 2000). On days when alcohol was consumed, partner aggression was more frequent and severe (Testa, Quigley, & Leonard, 2003). There have been mixed findings, however, about the relation between aggression and alcohol use in dating couples.

Early studies of alcohol use and dating aggression found that alcohol was not significantly related to dating aggression (e.g., Brodbelt, 1983; Laner, 1983), whereas later studies have found significant associations between alcohol use and dating aggression (Fossos, Neighbors, Kaysen, & Hove, 2007; Hines & Straus, 2007; Rapoza & Baker, 2008; Stappenbeck & Fromme, 2010; Stets & Henderson, 1991). Moreover, event-level investigations concluded that the odds of experiencing verbal or physical aggression among college women were greater on heavy drinking days compared to nondrinking days (Parks, Hsieh, Bradizz, & Romosz, 2008). In addition, both men and women increased their use of verbal aggression, and women increased their use of physical aggression, when alcohol was consumed 3 hours prior to the incident (Shook et al., 2000).

Alcohol's Effects on Aggression

The association between alcohol and aggression may be related to alcohol outcome expectancies, or the belief that alcohol leads to aggression. Alcohol may also increase aggression through its pharmacological effects by impairing higher order cognitive processes that would otherwise inhibit aggressive behavior. Placebo-controlled alcohol administration designs can help dissociate expectancy explanations from pharmacological explanations for the effects of alcohol on dating aggression.

Alcohol's Expectancy Effects on Aggression

An expectancy explanation suggests that aggression should increase if the person believes they have consumed alcohol (i.e., alcohol expectancy set) even if their beverage contains no alcohol. Such effects of expectancy set should be strongest when the individual believes that alcohol will make them more aggressive (i.e., alcohol outcome

expectancy) and aggression is seen as a positive outcome because it may relieve feelings of anger or frustration (Baumeister & Bushman, 2007). Some individuals with stronger alcohol outcome expectancies for aggression display more aggressive behavior in response to alcohol (Derman & George, 1989; Leonard & Senchak, 1993), but others do not (Norris & Kerr, 1993; Quigley & Leonard, 1999), suggesting that both pharmacology and expectancies may help explain the association between alcohol and aggression.

Alcohol's Pharmacological Effects on Aggression

A pharmacological explanation of the link between alcohol and aggression suggests that aggression should increase only after actually consuming alcohol regardless of whether the individuals believes his or her drink contains alcohol. Acute alcohol consumption is thought to impair executive cognitive functioning that is generally related to regulatory processes that would otherwise inhibit behavior (Giancola, 2000), therefore, intoxicated behavioral responses such as aggression may be more likely in response to a threat (Curtin, Patrick, Lang, Cacioppo, & Birbaumer, 2001). Specifically, acute alcohol consumption influences the cues to which an individual may attend, specifically those that are the most salient aspects of the situation (Steele & Josephs, 1990; Taylor & Leonard, 1983). If the predominant cues in the environment are aggressive in nature, intoxicated individuals are more likely to act aggressively than sober individuals. Moreover, alcohol interferes with higher order cognitive processes associated with personal standards of conduct (Bailey, Leonard, Cranston, & Taylor, 1983), making socially inappropriate behavior such as aggression more likely under the influence of acute alcohol intoxication. These cognitive and attentional impairments interfere with one's ability to self-regulate when intoxicated.

SELF-REGULATION

Self-regulation broadly refers to "the many processes by which the human psyche exercises control over its functions, states, and inner processes" (Vohs & Baumeister, 2004, p. 1). For the purposes of study in psychology, self-regulation is usually limited to efforts made to alter the way people think and feel, as well as behavioral impulses and task performances. A component of self-regulation, emotion regulation refers to a process whereby individuals evaluate their affective state and take action to either modify their affective experiences or expressive behaviors (Goldsmith & Davidson, 2004; Gross, 1998, 1999). There are several ways in which an individual can regulate their affective states, including the use of cognitive reappraisal to modify thoughts about emotionally laden situations in order to decrease the emotional response (Gross & John, 2003). Other strategies involve suppressing one's emotions or an emotionally-expressive behavioral response (Gross & John, 2003). Therefore, observable behaviors can either be an indication of regulation or dysregulation, the latter being associated with maladaptive behavioral outcomes including interpersonal aggression (Garber & Dodge, 1991).

Self-Regulation, Anger Arousal, and Aggression

The level of emotional arousal may influence the extent to which an individual employs regulatory processes. That is, when an individual experiences emotional arousal, they may engage in an emotional or behavioral regulatory process to modulate their level of arousal. Moreover, an individual's ability (or inability) to self-regulate will influence their arousal by maintaining, increasing, or decreasing their level of emotional arousal. In some cases, poor self-regulation will lead to high levels of anger arousal,

which has been related to the occurrence of interpersonal aggression (Berkowitz, 1993; Holtzworth-Munroe & Clements, 2007).

Husbands who perpetrated partner aggression expressed higher levels of anger arousal than nonaggresive husbands (Eckhardt, Barbour, & Stuart, 1997; Schumacher, Feldbau-Kohn, Slep, & Heyman, 2001). When couple communication was recorded and coded, aggressive couples expressed greater levels of anger than distressed but nonaggressive and nondistressed couples (Jacobson et al., 1994). In addition, the same association between anger arousal and aggression has been observed among dating couples. Compared to those without a history of dating aggression, individuals with a history of dating aggression engaged in more frequent anger-expressive behaviors, exhibited less control over their anger expression, and had poorer anger management skills (Dye & Eckhardt, 2000; Lundeberg et al., 2004). High levels of anger arousal among individuals with a history of aggression is concerning as feelings of anger were cited as a motivation to perpetrate dating aggression (Muñoz-Rivas, Graña, O'Leary, & Gonzalez, 2007). Thus, individuals who are poor at self-regulating and who experience greater levels of anger arousal may be more likely to engage in aggressive behavior.

Individual Differences and Dating Aggression

Individual difference factors may provide information about who is at greatest risk for perpetrating dating aggression. Trait aggressivity, a history of dating aggression, ethnicity, and relationship characteristics such as satisfaction and emotional commitment, have been associated with partner aggression.

Trait Aggressivity

Trait aggressivity, an individual's predisposition to engage in aggressive behavior (Buss & Perry, 1992), has been consistently shown to moderate the effects of alcohol intoxication on aggression (Eckhardt & Crane, 2008; Giancola, 2002; Giancola, Godlaski, & Parrott, 2005; Miller, Parrott, & Giancola, 2009). The effects of alcohol expectancies on aggressive behavior were rendered nonsignificant after controlling for participants' trait aggressivity, although a significant direct effect of alcohol intoxication remained (Giancola et al., 2005). These findings were replicated in a dating sample of men and women using the Articulated Thoughts in Simulated Situations (ATSS) procedure in which participants articulated responses to dating scenarios (Eckhardt & Crane, 2008). Intoxicated individuals high in trait aggressivity articulated more aggression than intoxicated individuals with low trait aggressivity and all participants in the placebo condition (Eckhardt & Crane, 2008). Thus, intoxicated aggression in dating situations appears to be the result of a combination of the pharmacological effects of alcohol and trait aggressivity.

Background and Relationship Characteristics

Although partner aggression is present among all ethnic groups, differences among ethnicities have been observed. The National Longitudinal Couples Survey reported that 23% of Blacks, 17% of Hispanics, and 11.5% of Whites experienced an incident of male-to-female partner aggression, and 30% of Blacks, 21% of Hispanics, and 15% of Whites experienced female-to-male partner aggression (Caetano et al., 2000). Additionally, rates of mutual partner aggression were greater among Blacks than Hispanics and Whites (Caetano, Ramisetty-Mikler, & Field, 2005). When comparisons

were made between Whites and non-Whites, non-White were at greatest risk for perpetrating physical aggression with an intimate partner (Roudsari, Leahy, & Walters, 2009).

Relationship characteristics such as satisfaction and the level of emotional commitment between partners have been related to the occurrence of dating aggression (Billingham, 1987; O'Leary, Malone, & Tyree, 1994; Pedersen & Thomas, 1992). Individuals with lower levels of relationship satisfaction were more likely to perpetrate psychological aggression than those with higher levels of satisfaction (O'Leary et al., 1994), which may be related to an increased amount of conflict occurring in relationships with lower satisfaction. Relationships that are defined as more meaningful, serious, or involve high levels of commitment, however, are at greater risk for partner aggression than more casual relationships (Arriaga, 2002; Pedersen & Thomas, 1992; Stith, Jester, & Bird, 1992). Close relationships involve a level of interdependency in which one partner's behavior has a significant impact on the other partner, which may lead to more conflict and therefore greater levels of aggression (Finkel, 2007). In addition, individuals in relationships with higher levels of commitment may be less likely to end the relationship following an incident of aggression.

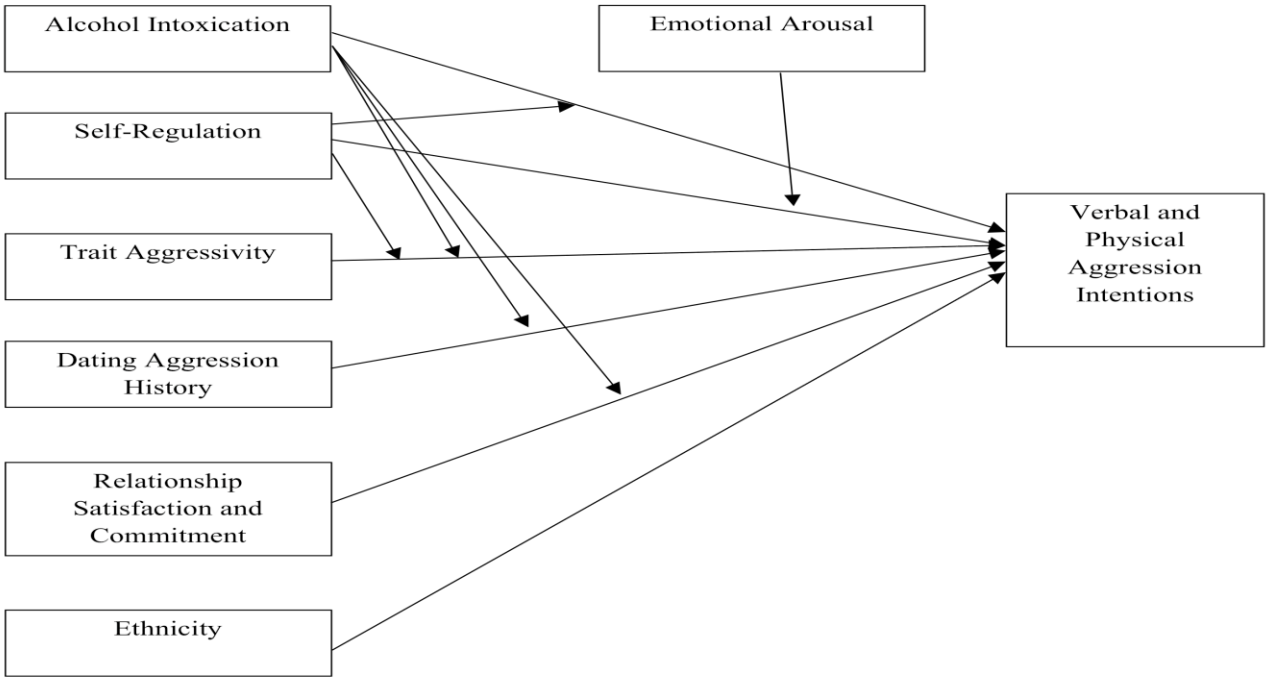
SUMMARY AND PROPOSED RESEARCH

Previous studies of alcohol's effects on partner aggression have typically not assessed both male- and female-perpetrated aggression in dating relationships. The current research therefore used experimental methodology to test the frequency with which verbal and physical aggression intentions were articulated in response to dating conflict, as well as the escalation from verbal to physical aggression intentions throughout the conflict scenario by both men and women. Specifically, an inability for

intoxicated individuals to self-regulate was tested as an explanatory mechanism of dating aggression. In addition, individuals who are less able to self-regulate their emotions and behavioral impulses may also report a greater level of emotional arousal and therefore articulate more verbal and physical aggression intentions, as well as an escalation from verbal to physical aggression intentions.

The direct effects of trait aggressivity on aggression intentions were examined as well as the moderating effects of alcohol intoxication. Trait aggressivity may also be related to aggression intentions due to an inability to regulate ones emotions and impulses. Moreover, because once a pattern of aggression is established in a relationship it is likely to continue, the effects of a past-year dating aggression on verbal and physical aggression intentions were examined. Additionally, the direct effects of ethnicity as well as the direct and indirect effects of relationship satisfaction and commitment on aggression intentions were also examined. Non-Whites and those lower in relationship satisfaction and higher in emotional commitment to their current dating partner were expected to articulate more aggression intentions than Whites and individuals with greater satisfaction and less commitment. These direct effects may be stronger among intoxicated individuals than sober individuals (regardless of whether they believed they received alcohol). Given the high rates of verbal aggression among dating partners, and the subsequent increased risk for physical aggression in response to conflict, the proposed research would inform much needed intervention efforts to break the cycle of aggression between dating partners. Illustration 1.1 represents the conceptual model from which the major study hypotheses are based.

Illustration 1.1. Conceptual model of the influences of alcohol intoxication, self-regulation, a past-year dating aggression, relationship characteristics, and ethnicity on aggression intentions



Chapter 2: Study 1 Construct Validity of Two Experimental Measures of Aggression

Introduction

Few investigations have utilized experimental designs to study dating aggression, with those that have primarily focused on male-perpetrated aggression in married couples (Eckhardt et al., 1998; Eckhardt, & Dye, 2000; Holtzworth-Munroe & Hutchinson, 1993; Jacobson et al., 1994; Leonard & Roberts, 1998). One of the most common methods for assessing aggression in the laboratory is the Taylor Aggression Paradigm (TAP; Taylor, 1967) in which participants engage in a competitive task with a fictitious partner, and aggression is measured as the administration of electric shocks to that partner. Although this has been found to reliably elicit aggression in men (Giancola, 2003; Giancola, Parrott, & Roth, 2006; Giancola & Zeichner, 1997; Parrott & Giancola, 2006), women do not regularly respond with aggression to this task (e.g., Giancola et al., 2005). Moreover, the TAP procedures may not be applicable to the kind of aggression often expressed in romantic relationships, such as psychological or verbal aggression. Two possible alternative methods for experimentally examining aggression occurring in the context of romantic relationships include the Articulated Thoughts in Simulated Situations (ATSS; Davison, Robins, & Johnson, 1983) procedure and the hot sauce task (Lieberman, Solomon, Greenburg, & McGregor, 1999).

Articulated Thoughts in Simulated Situations (ATSS)

The ATSS is a think-aloud procedure in which participants articulate responses to recorded scenarios, and it has been used frequently in the past 25 years as a cognitive assessment of anxiety (Davison, Haaga, Rosenbaum, Dolezal, & Weinstein, 1991), depression (White, Davison, Haaga, & White, 1992), and more recently partner aggression (Eckhardt, 2007; Eckhardt & Crane, 2008; Eckhardt & Jamison, 2002; Eckhardt, Jamison, & Watts, 2002). The ATSS procedure has advantages over questionnaire approaches in that the ATSS may provide a more accurate assessment of an individual's thoughts, as opposed to questionnaires that typically constrain participants to specific responses (Davison et al., 1983; Merluzzi, Rudy, & Glass, 1981). Additionally, participants provide responses after short 30-second segments of the recorded scenarios, which allows for a nearly real-time assessment of cognitions while reducing interference with the listening task (Davison, Vogel, & Coffman, 1997).

For studying partner aggression, the ATSS has elicited aggressive responses to interpersonal situations, including those involving jealousy (Eckhardt, 2007; Eckhardt & Crane, 2008; Eckhardt et al, 2002). The scenarios used in these studies typically portray the woman having (what appears to be) a romantic interaction with another man that her boyfriend or husband witnesses. Male participants who responded to this scenario using the ATSS procedure articulated aggressive responses (Eckhardt, 2007; Eckhardt et al., 2002), especially among those who were intoxicated, or who had higher levels of dispositional aggressivity or trait anger (Eckhardt, 2007; Eckardt & Crane, 2008). Although the scenario used in these previous studies may not be uncommon in dating relationships, it does not depict the potential reciprocal aggressive interaction that could occur between jealous partners. Because the majority of dating aggression is thought to

resemble the pattern of common couple violence in which arguments escalate from verbal to minor physical aggression and involve aggressive responding by both partners (Johnson, 1995), it is important to assess partners' responses to mutual aggression. To do so experimentally, it would be important to develop a new scenario that depicts a conflict between dating partners that escalates in mutual aggression from verbal to physical aggression. Additionally, although aggressive behavior by both men and women is likely to influence the escalation of aggression during the course of a conflict, only one known study has examined women's aggressive responses using the ATSS (Eckhardt & Crane, 2008). It is important, therefore, to investigate the aggressive responses of men and women during the course of a relationship conflict with escalating levels of mutual aggression.

Hot Sauce Task

The hot sauce task (Lieberman et al., 1999) is an experimental assessment of aggressive behaviors in which participants determine the amount of hot sauce a second fictitious participant must consume. The participant is typically informed that the other participant does not like spicy foods, and they are usually provoked prior to allocating the hot sauce. Recent studies have examined the allocation of hot sauce in response to ostracism, social appraisals, and alcohol intoxication (Evers, Fischer, Rodriguez Mosquera, & Manstead, 2005; Klinesmith, Kasser, & McAndrew, 2006; McGregor et al., 1998; Warburton, Williams, & Cairns, 2006). The hot sauce task was found to have convergent validity as the amount of hot sauce allocated was associated with trait aggressivity (Bègue et al., 2009; Denson, White, & Warburton, 2009). Additionally, both men and women have been found to respond with aggression to this task (Denson et al.,

2009), however, women responded less aggressively than men when they were told they would meet the fictitious participant (Evers et al., 2005).

The hot sauce task may be an alternative to other assessments that cause distress to participants, such as the TAP. This hot sauce task does not require expensive or elaborate equipment, and it is relatively flexible to assess aggressive responding to a variety of negative feedback or provocation. Additionally, it is easily quantifiable and is thought to be an ecologically valid assessment of aggression (Lieberman et al., 1999). It is not known, however, whether this task elicits aggression within a dating context and would reliably discriminate aggressive responding between those with and without a history of dating aggression.

Study 1 Aims and Hypotheses

The current study was designed to examine the reliability and construct validity of two experimental assessments of aggression: the ATSS and hot sauce procedures. The use of a novel dating conflict scenario in conjunction with the ATSS procedure was examined. This new scenario depicted a conflict that occurred between dating partners that stemmed from jealousy and escalated from verbal to physical aggression by both partners. Participants with and without a history of perpetrating verbal and physical dating aggression within the past year were recruited to participate.

For the ATSS, it was hypothesized that all individuals would rate the dating conflict scenario as involving a more serious and severe conflict than the neutral scenario. Additionally, it was anticipated that individuals with a history of past-year dating aggression would report more verbal and physical aggression intentions in response to the dating conflict scenario than individuals without a history of past-year dating aggression. Because the hot sauce task had not previously been used in a dating aggression context,

we tentatively hypothesized that individuals with a history of past-year dating aggression would allocate a greater amount of hot sauce to the fictitious participant than individuals without a history of past-year dating aggression.

METHOD

Participants

Participants (N = 61) were recruited from a large subject pool of introductory psychology students at UT Austin, newspaper advertisements, flyers around the community, and Internet advertisements (i.e., Craigslist). Eligible participants were in a current dating relationship for at least one month but were not married, and self-identified as heterosexual. Those who reported no verbal or physical aggression on the telephone or online screening questionnaire comprised the no dating aggression group (n = 30; 53% female). Individuals who reported perpetrating both verbal and physical aggression comprised the dating aggression group (n = 31; 48% female). Those who reported perpetrating severe physical aggression (i.e., beat up partner or used a weapon or gun against partner) were excluded from the study. Participants had an average age of 19.74 (SD = 2.13) years, average family income of $63,000, and their ethnic make-up was 38% White, 26% Asian, 21% Hispanic, 5% Black, and 10% multi-ethnic or other.

Procedures and Tasks

Individuals who met the initial inclusion criteria were screened over the telephone or online to determine their history of dating aggression within the past year. If eligible, they were scheduled for a single laboratory session in which trained undergraduate research assistants blind to the participant's aggression status administered all study

procedures. Upon arriving at the laboratory, participants were informed that another person of the opposite-sex was scheduled to participate at the same time. To add credibility to our cover story, both the actual and fictitious participant's names were pre-printed on a sign-in sheet that the participants completed immediately upon their arrival. Depending on whether the participant was early or late to their scheduled appointment, we modified the story to either indicate that the second participant had already arrived (i.e., was signed in) or had not yet arrived (i.e., was not signed in). After providing informed consent, participants were taken to a private assessment room that required they walk past a second assessment room prepared for the fictitious participant. Again, this room was either closed with a "study in progress" sign on the door if the other participant was said to have already arrived, or it was open and appeared set-up for the second participant. Participants were then asked to complete an initial packet of questionnaires assessing their baseline mood states.

Articulated Thoughts in Simulated Situations

Participants were informed that they would be listening to several recordings of a dating couple having conversations (see Appendix A for the instructions provided to participants). Both the neutral and conflict scenarios were presented in eight discrete segments each approximately 30-seconds in duration. The neutral scenario served as a baseline assessment of aggression and was therefore presented first. Participants were instructed to imagine that the situation depicted in each scenario was actually happening to them. Using the ATSS procedure, participants were given 30-seconds between each segment to respond out loud about their thoughts, feelings, and anticipated behavioral responses to what most recently happened in the scenario. While listening to each segment, participants were instructed to continuously track their subjective emotional

arousal. A meter presented on the computer screen reflected the current position of the mouse, and participants indicated increases or decreases in their arousal by moving the mouse forward or backward, respectively. To ensure that all participants were familiar with the equipment and understood the study procedures, participants were given several practice trials in which they listened to recordings of a children's book. Corrective feedback on study procedures and additional practice trials were provided as necessary. After the practice trials, research assistants left the room and asked participants to use the same procedures while listening to the neutral and conflict scenarios. Articulated responses were recorded by a microphone attached to a digital voice recorder.

Hot Sauce Task

The hot sauce procedure (Lieberman et al., 1999) was modified for use in the current study to fit within the context of conflict in dating relationships. After completing the ATSS procedures, participants were informed that the second part of the study consisted of an assessment of sensitivity. They were told that the second participant completed the same procedure and that they would each evaluate a graph of the other's emotional arousal to the conflict scenario. They were given an arousal graph, purportedly provided by the other participant, and asked to provide feedback about the person's emotional sensitivity. They were told that the other participant was doing the same for them and their feedback would be exchanged. Participants were then presented with negative feedback provided by the second (fictitious) participant. Again, to add credibility to the manipulation, feedback was hand written by research assistants of the same gender as the fictitious participant (e.g., a male if the actual participant was female) and personalized with their name in several places throughout the feedback.

Under the guise of an assessment of taste sensitivity, participants were then provided a small sample of hot sauce and asked to indicate their preference and liking of the hot sauce. They were given the fictitious participant's taste preference indicating a strong dislike for the hot sauce, and were then told to pour as much or as little hot sauce into a container for the other participant to consume. They were again told that the other participant was doing the same for them. After allocating an amount of hot sauce, participants were debriefed regarding the deception and actual intentions of the hot sauce task.

Positive Mood Manipulation

After completing both aggression assessments and being debriefed, participants viewed a 10-minute video clip of the popular comedy television series "The Office" as a positive mood manipulation. This ensured that participants did not leave the laboratory feeling distressed after exposure to the dating conflict scenario and hot sauce task. A similar mood manipulation procedure has been shown to reliably elicit a positive mood (Ciarrochi & Forgas, 2000). Afterward, participants rated their current mood to ensure they did not endorse feeling "very angry." The candidate was available to meet with the participant in a private room to discuss the nature of their angry mood and to determine whether or not they were safe to leave the lab, although this was not necessary. Lastly, participants were compensated $15 or awarded research credit, and were provided a list of campus and community resources for dating aggression.

Audio-Taped Stimuli

Two audio-taped test stimuli were used: a neutral and conflict scenario. Transcripts of both scenarios are included in Appendix B. The neutral scenario depicted

an ordinary conversation between a dating couple regarding a party they attended earlier in the evening as well as their upcoming plans. The conflict scenario depicted mutual aggression between dating partners that began as a mild disagreement and escalated in intensity to a verbal argument, to more intense yelling and arguing, and finally to mild physical aggression. The conflict between the partners involved an issue of jealousy that arose at a party earlier in the evening, as jealousy was rated one of the major problems identified in dating relationships (Storaasli & Markman, 1990), and a reason often cited for aggression in relationships (Stets & Pirog-Good, 1989).

The dating conflict scenario was pilot-tested for realism, credibility, and appropriateness of the content. College-aged participants (N = 18; 56% female) were invited to the lab in same-sex groups consisting of 3-4 individuals. They were asked to listen to the conflict scenario in private rooms and then participated in focus groups to discuss their opinions and reactions to the scenario. These focus groups were designed and facilitated by the candidate and a trained research assistant to help ensure that participants felt comfortable discussing their reactions. Participants were asked to discuss the realism and credibility of the scenario, the appropriateness of the content for individuals their age, as well as the escalation of severity throughout the conflict. The detailed feedback was transcribed and then used to modify the script accordingly. Professional actors were hired to play the role of the dating couple for the final recordings in a state-of-the-art recording studio at The University of Texas at Austin. Additionally, sound effects were added to the final recordings by a professional sound technician to reflect the use of physical aggression and breaking objects that enhanced the realism and credibility of the scenario.

Measures (Provided in Appendix C)

Demographics

Participants reported their age, gender, ethnicity, and SES. They were also asked the status of their relationship on a 5-point scale (1 = not dating, 2 = dating, but not exclusively, 3 = dating exclusively, 4 = engaged, and 5 = married), length of time in current relationship measured in months, and level of emotional commitment in current relationship on a 7-point scale (1 = casual dating, little emotional commitment; 4 = moderate emotional commitment; 7 = someone with whom you are engaged or intend to marry).

Past Dating Aggression

The Psychological Aggression and Physical Assault subscales of the revised Conflict Tactics Scale (CTS-2; Straus, Hamby, Boney-McCoy, & Sugarman, 1996) were used to assess the participants' perpetration of dating aggression during the past year. The Psychological Aggression subscale is comprised of 8 items (e.g., "You insulted or swore at your partner") and the Psychological Assault subscale included 10 items (e.g., "You pushed or shoved your partner"). Respondents provided the number of times they engaged in each behavior in the past year on a 7-point scale (0 = none; 1 = once; 2 = twice; 3 = 3-5 times; 4 = 6-10 times; 5 = 11-20 times; 6 = more than 20 times). The Psychological Aggression and Physical Assault subscales have good internal consistency (coefficient alphas .79 and .86, respectively; Straus et al., 1996).

Mood Ratings

A revised version of the Profile of Mood States (POMS; Gabrielli, Nagoshi, Rhea, Wilson, 1991) was administered to assess state affect immediately before and after the presentation of the audio-taped scenarios. The revised POMS included 24 items reflecting feelings of tension and anxiety (e.g., tense, on edge), hostility (e.g., angry, ready to fight), depression (e.g., worthless, helpless), energy (e.g., lively, energetic), friendliness (e.g., cooperative, good-natured), and problems concentrating (e.g., forgetful, confused). Items were rated on 5-point scales (1 = not at all; 5 = extremely). Items within each subscale were summed and have adequate interitem reliabilities (Cronbach's alphas range from .62 to .83).

Subjective Emotional Arousal

Subjective emotional arousal was assessed continuously throughout the presentation of the audio-taped stimuli using the Arousometer, a procedure established by the Female Sexual Psychophysiology Laboratory at the University of Texas at Austin for use with subjective ratings of sexual arousal (e.g., Rellini, McCall, Randall, & Meston, 2005). Participants controlled a computer optical mouse, the placement of which was associated with a meter divided into 10 equally spaced intervals displayed on the computer screen in front of them. Participants were instructed to indicate their level of emotional arousal throughout the presentation of the audio tapes (1 = no emotional arousal; 10 = extreme emotional arousal; see Appendix A for the Arosometer instructions). The computer to which the mouse was connected was equipped with a software program written for the purposes of the current study (ExpStap) and monitored the location of the pointer corresponding to the position of the mouse every 0.5s. Thus,

as the participant moved the mouse in response to increases or decreases in emotional arousal, the meter on the screen reflected the level of arousal, which was continuously tracked using the computer program. Arousal ratings were converted to a continuous 0 to 1 scale (0 = no emotional arousal; 1 = extreme emotional arousal).

Mean and peak subjective emotional arousal ratings were calculated for each segment. When the segment peak equaled 0 it was assumed that the participant had not moved the mouse from its starting position during the 30-second segment. As this is indicative of non-compliance with the Arousometer procedure, the observations from those segments were removed prior to calculating an overall average arousal for both scenarios. For the neutral scenario, the observations from 64 segments (12.7% of all possible segments) from 25 participants were removed. There was better compliance with the Arousometer procedures during the conflict scenario as observations from 24 segments (4.9% of all segments) from 11 participants were removed.

Experimental Measures of Aggression

Each participant's digital voice recordings were transcribed to a coding sheet and responses were coded by two advanced undergraduate students who received 20 hours of training with the candidate on a coding manual developed for similar research (Eckhardt et al., 2002). The coders, who were blind to condition, listened to each response while also reading the corresponding transcript of the articulated thoughts. They independently tallied the number of verbal and physical aggression intentions that were articulated within each segment of the neutral and conflict scenarios. Participants' statements were coded as a verbal aggression intention if the participant insulted or demeaned a character in the scenario or indicated that they would insult or demean their partner in a similar situation. Physical aggression intentions were coded as statements that expressed a desire

to physically hurt a character in the scenario or their partner (e.g., push, slap, throw something at him/her). Tallies of the articulated verbal and physical aggression intentions were calculated for each segment, and were also summed across segments for a total verbal and physical aggression intention score for both the neutral and conflict scenarios. Intraclass correlation coefficients were high for verbal (r_{icc} = .90) and physical (r_{icc} = .92) aggression intentions, indicating good consistency between the coders.

Aggressive behavior to the hot sauce task was operationalized as the amount of hot sauce (in ounces) allocated to the fictitious participant. The chili hot sauce was comprised of 5 parts Heinz chili sauce and 3 parts Tapatio salsa picante hot sauce. This ratio was used because it was rated quite hot in the initial published study (M = 7.2 on a 9-point scale [1 = not much discomfort; 9 = extreme discomfort]), and it produced a consistency conducive to pouring larger amounts as compared to hot sauces that require only a few drops (Lieberman et al., 1999).

Sensitivity Rating Forms

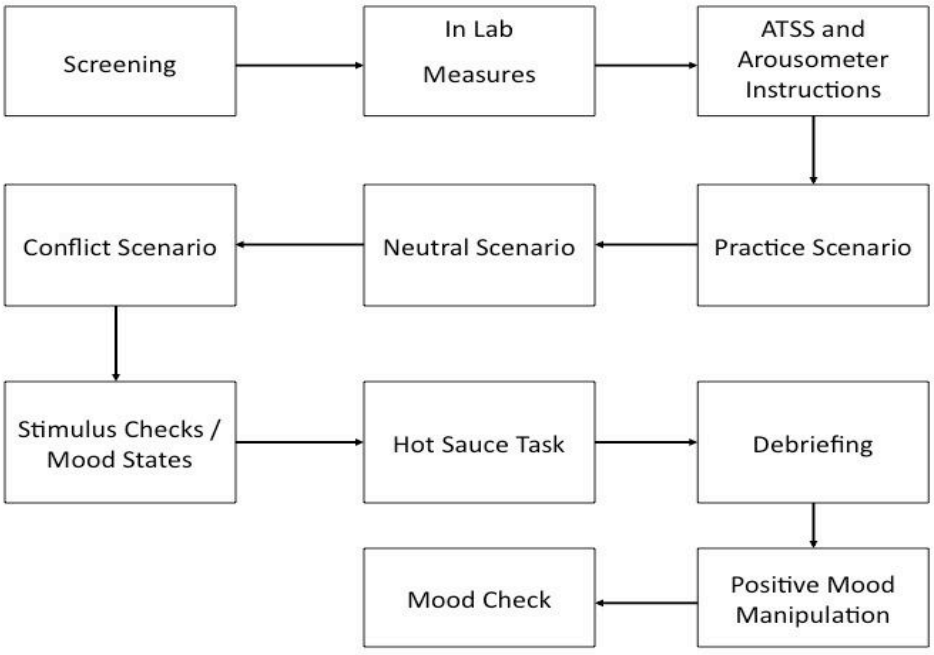
The Emotional Sensitivity Rating Form was used to provide negative feedback about the participant from the second (fictitious) participant. It contained 4 items about emotional sensitivity and stability, aggressiveness, and how likely he or she would be to date the participant. Responses were provided on a 7-point scale (0 = not at all; 6 = very).

The Taste Rating Form consisted of 4 items used to assess the degree to which the participant liked the hot sauce, the spiciness of the hot sauce, and how uncomfortable or painful it was to consume the hot sauce. Each item was rated on a 7-point scale (0 = not at all; 6 = very). For the current study, the hot sauce was rated as being moderately spicy (M = 3.36, SD = 1.53).

Manipulation Checks

Participants reported on the realism, believability, and severity of the scenario as well as the extent to which they were able to imagine themselves in the scenario on a 5-point scale (1 = not at all; 5 = extremely). To determine whether participants believed the deception used as part of the Hot Sauce Task, participants were asked to respond either "yes" or "no" to whether or not they believed that their negative feedback came from another participant. In addition, participants rated how good/bad, happy/sad, and angry/calm they currently felt on 6-point scales anchored by the word pairs (e.g., 1 = very good; 3 = neither good nor bad; 6 = very bad) to determine the effectiveness of the positive mood manipulation. This approach has been shown to be a reliable and effective way to measure experienced mood (e.g., Forgas, 2002).

Illustration 2.1. Study 1 procedures flow-chart.



Analytic Strategy

Verbal and physical aggression intentions were modeled as a negative binomial distribution as these count data had positively skewed distributions in which the variance was greater than the mean. These analyses provide an incidence rate ratio (IRR), or the change in frequency with which verbal or physical aggression intentions were articulated as a function of another variable (e.g., past-year dating aggression). The neutral scenario was always administered before the conflict scenario to provide a baseline level of aggression intentions. All analyses with verbal or physical aggression intentions as the dependent variable, therefore, included the total aggression intentions to the neutral scenario as a covariate in the equation to control for baseline aggression intentions.

Because negative binomial regressions were not planned, the a priori power analysis was calculated for a linear multiple regression. The differences between those with and without a history of dating aggression were expected to be rather robust, therefore, the sample size needed to detect a medium effect ($f^2 = .15$) was estimated. With two predictors in the regression equation at an alpha level of .05 and 80% power, 68 participants were recommended and targeted for recruitment (Cohen, 1988; as implemented in GPOWER [Faul & Erdfeller, 1992]).

RESULTS

The majority of participants indicated that their current dating relationship was exclusive (88.5%), whereas 9.8% were in a non-exclusively relationship and 1.6% reported being engaged, with 8 months as the average length of their relationships. Chi-square analyses to evaluate differences between participants with and without a history of past-year dating aggression indicated no significant differences for ethnicity, $\chi^2(4, N =$

61) = 3.55, p = .47, age, $\chi^2(8, N = 61) = 7.15$, p = .52, or length of time in their current relationship, $\chi^2(3, N = 61) = 2.39$, p = .50. See Table 2.1.

Table 2.1. Means (and Standard Deviations) of Aggression Intentions and the Amount of Hot Sauce Allocated by Participants With and Without Past-Year Dating Aggression

	Observed Range	No Past-Year Dating Aggression (n = 30) Mean (*SD*)	Past-Year Dating Aggression (n = 31) Mean (*SD*)	*t*
Aggression intentions				
Neutral scenario				
Verbal	0 – 2	0.10 (0.40)	0.16 (0.45)	0.56
Physical	0	--	--	--
Conflict scenario				
Verbal	0 – 11	0.77 (1.45)	1.84 (2.31)	2.16*
Physical	0 – 15	0.10 (0.40)	1.23 (2.81)	2.17*
Hot sauce allocated	0 – 2.1	0.28 (0.48)	0.27 (0.34)	0.09

Note. The amount of hot sauce allocated was measured in ounces.
*p < .05.

ATSS

Participants reported that the scenarios were believable (Neutral M = 3.72, SD = 0.95; Conflict M = 3.61, SD = 0.97) and realistic (Neutral M = 3.66, SD = 0.93; Conflict M = 3.49, SD = 0.92), and these ratings did not differ between the scenarios (p's > .05). In comparison to the neutral scenario, participants also indicated that the conflict scenario depicted more serious (Neutral M = 2.34, SD = 1.0; Conflict M = 4.79, SD = 0.45; $t(60)$ = 16.62, p < .001), and severe (Neutral M = 1.18, SD = 0.43; Conflict M = 4.74, SD = 0.44; $t(60)$ = 46.91, p < .001), conflict between the dating partners.

Verbal and Physical Aggression Intentions

Overall, the conflict scenario elicited more verbal aggression intentions (M = 1.31, SD = 2.00) than the neutral scenario (M = 0.13, SD = 0.43), $t(60) = 5.14$, $p < .001$. Similarly, the frequency of physical aggression intentions provided in response to the conflict scenario (M = 0.67, SD = 2.09) was significantly greater than zero (as there was no physical aggression in response to the neutral scenario), $t(60) = 2.52$, $p < .05$. Men and women did not differ in their frequency of verbal aggression intentions to either the neutral, $t(59) = 1.79$, $p = .08$, or the conflict scenario, $t(59) = 1.34$, $p = .19$, or their physical aggression intentions to the conflict scenario, $t(59) = 0.51$, $p = .61$.

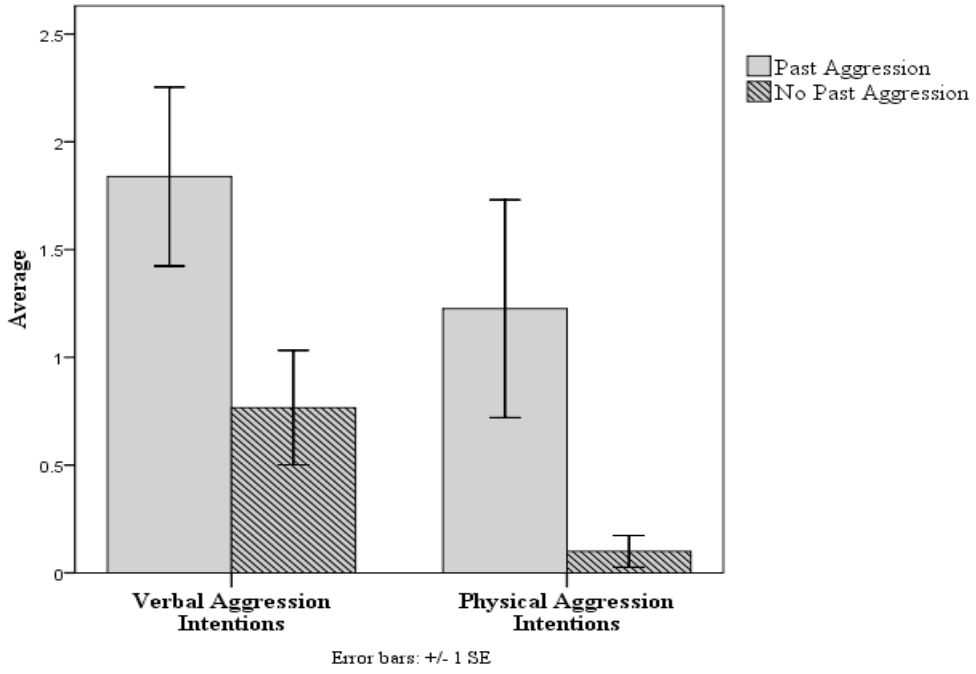
Separate negative binomial regression analyses were conducted for verbal and physical aggression intentions to examine differences between those with and without a history of past-year dating aggression (Table 2.2). The average verbal and physical aggression intentions for participants with and without a history of dating aggression are shown in Figure 2.1. As anticipated, participants with past-year dating aggression articulated more verbal aggression intentions than those without a history of aggression, b = 0.81, $p < .05$. Additionally, participants with past-year dating aggression also expressed more physical aggression intentions than those without a history of aggression, $b = 2.53$, $p < .01$. Thus, the conflict scenario demonstrated construct validity, as those known to have a history of both verbal and physical dating aggression were more likely to articulate both verbal and physical aggression intentions in response to conflict compared to those without a history of dating aggression.

Table 2.2. The Effects of Dating Aggression History on Verbal and Physical Aggression Intentions

	Verbal Aggression Intentions		
Predictor	*b*	*p*-value	*IRR* (95% C.I.)
Neutral aggression intentions	0.99	.002	2.69 (1.45, 4.98)
Past-year dating aggression	0.81	.017	2.25 (1.15, 4.39)
	Physical Aggression Intentions		
Neutral aggression intentions	-0.40	.580	0.67 (1.64, 2.74)
Past-year dating aggression	2.53	.001	12.60 (2.97, 53.51)

Note. IRR = Incidence Rate Ratio.

Figure 2.1. Average Verbal and Physical Aggression Intentions for Individuals With and Without a History of Dating Aggression



Subjective Emotional Arousal

The difference between the average levels of subjective arousal reported to the neutral and conflict scenarios was examined using a paired samples t-test. Participants reported greater emotional arousal to the conflict (M = 0.48, SD = 0.15) than the neutral (M = 0.18, SD = 0.15) scenario, $t(60) = 15.36$, $p < .001$. Two independent samples t-tests were conducted to compare differences between the average levels of arousal between those with and without a history of aggression. No differences between individuals with (Neutral M = 0.21, SD = 0.17; Conflict M = 0.50, SD = 0.17) and without (Neutral M = 0.15, SD = 0.12; Conflict M = 0.46, SD = 0.19) a history of dating aggression were observed on average arousal to either the neutral, $t(59) = 1.44$, $p = .16$, or conflict, $t(59) = 0.87$, $p = .39$, scenarios. Therefore, the conflict scenario was more emotionally arousing than the neutral scenario, and ratings of arousal did not differ between those with and without a history of dating aggression.

Changes in Mood States

Although not a primary aim of this study, participants' mood states were examined immediately before and after the ATSS procedures had been completed. Of interest was a determination of the kinds of moods that may have been elicited in response to listening to the conflict scenario. Differences in the means were examined using paired samples t-tests (see Table 2.3). Participants reported increased feelings of tension and anxiety, $t(60) = 5.46$, $p < .001$, hostility, $t(60) = 6.58$, $p < .001$, and depression, $t(60) = 2.59$, $p < .05$, and decreased feelings of friendliness, $t(60) = -7.34$, $p < .001$, after listening to both audio-taped scenarios compared to before. There were no significant changes in feeling energetic, $t(60) = 1.54$, $p = .13$, or problems with

concentration, $t(60) = 0.63$, $p = .53$. The scenarios, presumably the conflict scenario, appeared to have the desired effect of eliciting a variety of negative mood states and reducing positive affect, but did not produce changes in unrelated mood states such as energy or concentration.

Table 2.3. Means (and Standard Deviations) of Participants' Mood States Assessed Before and After the ATSS Procedure

	Pre-ATSS Mean (*SD*)	Post-ATSS Mean (*SD*)	*t*
POMS subscales			
Tension and anxiety	5.82 (2.16)	7.90 (3.64)	5.46***
Hostility	4.66 (1.59)	7.54 (3.82)	6.58***
Depression	5.07 (2.06)	5.77 (2.69)	2.59*
Energetic	13.38 (2.98)	13.87 (3.03)	1.54
Friendliness	15.31 (2.88)	12.26 (3.72)	-7.34***
Concentration problems	6.77 (3.02)	6.56 (2.64)	-0.63

Note. ATSS = Articulated Thoughts in Simulated Situation; POMS = Profile of Mood States; The POMS subscales have a possible range of 4-20.
*$p < .05$; ***$p < .001$.

Hot Sauce Task

An independent samples t-test was used to examine gender differences on the amount of hot sauce allocated to the fictitious participant and found no significant difference between men (M = 0.26, SD = 0.36) and women (M = 0.28, SD = 0.46), $t(57) = -0.18$, $p = .86$. A similar independent samples t-test was used to examine differences between those with and without a history dating aggression on the amount of hot sauce allocated to the fictitious participant (see Table 2.1). Contrary to study hypotheses, individuals with a history of dating aggression did not allocate more hot sauce than those without a history of dating aggression, $t(57) = -0.09$, $p = .93$.

DISCUSSION

This study examined the construct validity for a dating conflict scenario using the ATSS procedure and a hot sauce task. Specifically, I wanted to determine whether individuals with a history of dating aggression would respond more aggressively to the experimental assessments of aggression than those without a history of aggression. The purpose of the study, therefore, was to support the use of these aggression measures in future studies, including the second planned dissertation study investigating the effects of alcohol intoxication on aggressive responses.

ATSS

Current findings suggest that the conflict scenario demonstrated construct validity as it elicited more aggressive responses from individuals known to have a history of dating aggression within the past year compared to those without a history of dating aggression within the past year. Additionally, the conflict scenario was rated as being more serious and involving more severe conflict between the dating partners than the neutral scenario. The conflict scenario was also more emotionally arousing than the neutral scenario, with participants reporting increased negative mood states and decreased positive mood states after completing the ATSS procedures. It is not known whether participants' moods changed in response to only the conflict scenario as mood states were assessed after both the neutral and conflict scenarios were presented. Because the conflict scenario was rated as more emotionally arousing than the neutral scenario, however, it is likely that the changes in mood were a result of listening to the conflict scenario. These findings support that fact that the conflict scenario is emotionally distressing and elicits verbal and physical aggression intentions from individuals who

have a recent history of dating aggression. Therefore, the conflict scenario is likely to provide responses from participants in future studies that are in line with their actual behavioral responses if he or she should engage in a serious dating conflict.

Hot Sauce Task

Participants with a history of dating aggression did not allocate more hot sauce to the fictitious participant than those without a history of aggression. The hot sauce task, therefore, may not be an effective proxy for all types of aggression. In addition, because the original hot sauce procedure was modified for the current study, the type of provocation used may not have been sufficient to elicit aggressive responding. The participants, however, reported that they believed there was a second participant in the laboratory and that the feedback from the fictitious participant was negative. Another possible explanation for the lack of significant effects for this task relates to the overall ratings of spiciness in the current study. The hot sauce was rated as less spicy than in previous studies (e.g., Lieberman et al., 1999) despite using the same hot sauce recipe. There may be regional differences that influence participants' sensitivity to spiciness that should be considered in future studies.

Conclusions

The conflict scenario demonstrated adequate construct validity and, therefore, its use in future studies was supported. The hot sauce task, however, did not produce overall differences in aggressive responding between those with and without a history of dating aggression. It was therefore determined that the hot sauce task would not be included in the second dissertation study.

Chapter 3: Study 2 The Effects of Alcohol Intoxication and Self-Regulation on Aggression Intentions in Response to a Mutual Dating Aggression Scenario

INTRODUCTION

Experimental studies of marital aggression have concluded that alcohol intoxication increases aggressive responding (e.g., Eckhardt, 2007; Leonard & Roberts, 1998). Leonard and Roberts (1998) examined the effects of alcohol on the interactions of married couples either with or without a history of male-perpetrated aggression. Regardless of their history of aggression, husbands' alcohol consumption increased the negative interactions of both husbands and wives. Additionally, intoxicated men with a history of perpetrating partner aggression articulated more aggression intentions in response to marital conflict scenarios than intoxicated men without a history of perpetration and all men who had not consumed alcohol (Eckhardt, 2007).

Recent experimental investigations of the relation between alcohol intoxication and dating aggression have provided preliminary evidence that consuming alcohol increased the likelihood of verbal and physical aggression in both men and women (Stappenbeck, Kruse, & Fromme, 2006). Specifically, intoxicated women reported a greater likelihood of engaging in verbal aggression than men who consumed alcohol and sober individuals, and both intoxicated men and women indicated that they were more likely to use physical aggression than sober participants. This study, however, had a

small sample size and did not include a placebo control to examine differences between the pharmacological and expectancy effects of alcohol.

Eckhardt and Crane (2008) examined the aggressive verbalizations of young men and women in response to interpersonal scenarios after either receiving alcohol or placebo. Using a composite aggression variable that included verbal, physical, and belligerent aggression intentions, the authors concluded that intoxicated individuals high in trait aggressivity articulated more aggressive statements than intoxicated individuals with low trait aggressivity and all participants in the placebo condition (Eckhardt & Crane, 2008). Although this finding is consistent with previous research (e.g., Giancola et al., 2005), it is unlikely that trait aggressivity alone influenced the aggressive responding of intoxicated individuals. It may be that individuals prone to aggression were less able to regulate their emotions and impulses, which led them to articulate more aggressive responses.

A failure to self-regulate, or control ones impulses or emotions, may represent a proximal cause of aggression, as individuals with poor self-regulation were more likely to act aggressively when provoked (Baumeister, 1997; DeWall et al., 2007). This may be even more likely among individuals who are intoxicated, as poor self-regulation has been related to the occurrence of alcohol-related consequences more generally (Carey, Neal, & Collins, 2004; Neal & Carey, 2005, 2007). Therefore, alcohol intoxication may influence one's ability to self-regulate and facilitate aggression.

Study 2 Aims and Hypotheses

The current investigation provided an initial examination of the relations among alcohol intoxication, self-regulation, and trait aggressivity to provide a more thorough understanding of the occurrence of dating aggression. In an attempt to address the

limitations of previous research, the aggression intentions were examined for both men and women in dating relationships. In addition to an alcohol condition, both placebo and no alcohol control conditions were included to assess the pharmacological versus expectancy effects of alcohol on verbal and physical aggression intentions. Because aggressive behavior is more likely on the ascending limb of the BAC curve (i.e., when BAC is rising) associated with the stimulant effects of alcohol (Holdstock & de Wit, 1998; Martin, Earleywine, Musty, Perrine, & Swift, 1993), the ATSS procedures were targeted for completion on the ascending limb.

Several a priori hypotheses were tested (see Appendix D for an overview of the hypotheses, their theoretical underpinnings, as well as how they were tested). The direction of the direct effects are specified below, however, alcohol intoxication, self-regulation, and emotional arousal were expected to moderate several of the direct effects. For those indirect relations, it was anticipated that alcohol intoxication (compared to being sober regardless of whether or not alcohol was expected), poorer self-regulation, and greater emotional arousal would be associated with more verbal and physical aggression intentions.

1. Alcohol intoxication will have both direct and moderated effects on aggression intentions.

    1a. Intoxicated individuals will report more verbal and physical aggression intentions across the conflict scenario than those who received placebo or no alcohol and this will be moderated by self-regulation.

    1b. Verbal aggression intentions will predict the occurrence of physical aggression intentions, and this will be moderated by alcohol intoxication and by self-regulation.

1c. Alcohol intoxication will be associated with an escalation from verbal to physical aggression intentions, an effect that will be moderated by self-regulation.

2. Self-regulation will have direct and moderated effects on aggression intentions.

2a. Poor self-regulation will be associated with greater emotional arousal.

2b. Poor self-regulation will be associated with more aggression intentions and will be moderated by emotional arousal.

2c. Poor self-regulation will be associated with an escalation from verbal to physical aggression intentions, an effect that will be moderated by emotional arousal.

3. Trait aggressivity and a history of previous dating aggression will have both direct and moderated effects on aggression intentions.

3a. Higher trait aggressivity will be associated with more verbal and physical aggression intentions and will be moderated by alcohol intoxication and by self-regulation.

3b. A greater frequency of past-year dating aggression will be associated with more verbal and physical aggression intentions and will be moderated by self-regulation.

4. Ethnicity and relationship characteristics will have direct and moderated effects on aggression intentions.

4a. Non-Whites will report more aggression intentions than Whites.

4b. Lower relationship satisfaction will be associated with more aggression intentions and will be moderated by alcohol intoxication.

4c. Greater relationship commitment will be associated with more aggression intentions and will be moderated by alcohol intoxication.

METHODS

Participants

Participants (N = 150; 51% female) were recruited in a similar manner to Study 1 (p. 17), including recruitment from the introductory psychology subject pool and Internet advertisements on Craigslist. In addition to the inclusion criteria used in Study 1 (i.e., heterosexual orientation, dating for at least one month, and not married), participants had to be between the ages of 21 and 30, and meet criteria for the administration of alcohol. The National Institute of Alcohol Abuse and Alcoholism (NIAAA, 2005) recommendations were followed for the administration of alcohol, including the absence of symptoms of alcohol dependence and/or medical (e.g., women testing positive for pregnancy), and personal or ethical contraindications to the ingestion of alcohol. Additionally, participants were screened to ensure they were alcohol non-naïve as evidenced by their having consumed at least three drinks in one sitting on a minimum of three occasions during the three months prior to study participation.

Participants had an average age of 23.08 (SD = 2.22), average family income of $55,000, and their ethnic distribution was 51.4% White, 22.2% Hispanic, 16.0% Asian, 2.8% Black, and 7.6% multi-ethnic or other. The majority of participants indicated that their current dating relationship was exclusive (80%), whereas 16.6% were in non-exclusive dating relationships and 3.5% were engaged. The average length of time in their current relationship was 9 months, and participants reported moderate emotional commitment (M = 5.08, SD = 1.55; observed range 1 to 7) to their current dating partner.

Procedures and Tasks

Participants were screened over the telephone for inclusion criteria. Eligible participants were informed that they may consume alcohol as part of the study procedures and were instructed to eat a full meal four hours prior to their scheduled appointment and refrain from consuming alcohol for the 24-hours before their session. They were also informed not to bike or drive to the session. They could arrange transportation home by a friend or family member or be driven by a licensed and insured member of the research staff. Prior to their appointment, participants were sent a link to a SurveyMonkey Internet-based survey and asked to provide informed consent as well as complete self-report measures assessing previous partner aggression and general trait aggressivity. These assessments were separated in time from the laboratory session to reduce any potential bias on the aggression task.

Prior to arriving in the laboratory, participants were randomly assigned to an alcohol, placebo, or no alcohol condition. Trained research assistants were either told that the participants' condition was alcohol or no alcohol, and thus were blind to the alcohol and placebo conditions. Upon arrival, participants completed informed consent, presented their photo identification as proof of legal drinking age, and took a breathalyzer test (Intoxilyzer 5000, CMI, Inc. Owensboro, KY) to ensure .00% BAC. Female participants were also required to complete a pregnancy test prior to participating in the alcohol administration protocol. Female research assistants checked the pregnancy tests to ensure negative results. The candidate or a trained graduate student was available to provide any positive pregnancy test results to participants in a private room. Participants then completed the remainder of the self-report measures and a computer-based implicit measure of emotion regulation in counter-balanced order.

Beverage Manipulation

Trained research assistants used standardized alcohol administration dose calculations, based on participants' gender and weight, to determine individual dosing procedures. For the alcohol condition, beverages contained a 1:3 mixture of 80 proof vodka (men: 2.389 ml/kg of body weight; women: 2.174 ml/kg of body weight) to SAHARA Breeze mixer to achieve a target BAC of .08%, whereas participants in the placebo condition received the same 1:3 ratio of decarbonated tonic to mixer. The SAHARA Breeze mixer has been shown to be effective with placebo administrations, and consisted of cranberry juice, diet cherry 7-up, and Roses lime juice (Corbin, Gearhardt, & Fromme, 2008; Leeman, Corbin, & Fromme, 2009). Participants in the no alcohol condition were given three beverages of chilled water in an amount equal to the liquid they would have received in either the alcohol or placebo conditions. All participants received 10 minutes to consume each of three beverages.

Once in the simulated bar, bartenders provided the expectancy manipulation by informing participants that they had either been assigned to the alcohol condition (for both the alcohol and placebo conditions), or to the no alcohol condition. For participants in the alcohol and placebo conditions, several steps were taken to ensure the credibility of the placebo manipulation. These procedures were based on those initially outlined by Rohsenow and Marlatt (1981), and have been successfully implemented in our laboratory (e.g., Fromme, D'Amico, & Katz, 1999). Prior to their first breathalyzer test all participants rinsed with alcohol-free mouthwash. In addition to removing any trace amounts of alcohol from other mouthwashes possibly used before arriving in the laboratory, this also provided a strong taste to mask the presence or absence of alcohol in the first sips of participants' drinks. The bar was wiped with tequila immediately before

the participants' arrival to provide a temporary olfactory cue of the presence of alcohol, and the rims of the glasses were moistened with vodka to provide the taste of alcohol for the first few sips. All drinks were poured in full view of the participants from an Absolut vodka bottle that was sealed prior to each administration session with a clear perforated cap seal that fit similarly to the plastic seal on new unopened vodka bottles. Just before serving the drinks, bartenders added a squirt of liquid to the top of each drink from a plastic lime juice container that either contained lime juice in the alcohol condition or 190 proof alcohol in the placebo condition. For those in the placebo condition, this provided the taste of alcohol to the first few sips of each drink as well as an olfactory cue of the presence of alcohol.

Following a 15-minute absorption period, participants completed a set of questionnaires that included measures of subjective intoxication, mood states, and a beverage manipulation check. A staff member aware of the participant's beverage condition assessed their BACs and provided participants in the alcohol and placebo conditions with false visual feedback indicating a BAC of .04%, and participants in the no alcohol condition with their actual feedback indicating a BAC of .00%. Immediately after the ATSS procedures (approximately 60-minutes after finishing their last drink), participants provided a second BAC using a hand-help Alco-Sensor IV breathalyzer and completed a questionnaire including the subjective intoxication and mood states items. At approximately 90-minutes after completing their last drink, participants in the alcohol condition provided a third BAC and completed the subjective intoxication measures. Subsequent BAC readings were taken every 60-minutes thereafter until participants' BACs were below .02%, which was determined to be a safe level for participants to leave the laboratory (NIAAA, 2005). At that time, if participants showed no evidence of

behavioral impairment, they were allowed to call for their ride or were driven home by a licensed and insured member of the project staff.

ATSS Procedure

The ATSS procedure was identical to Study 1 (p. 18).

Positive Mood Manipulation

Procedures identical to Study 1 were used for the positive mood manipulation (p. 20). Following the video-clip, participants in the placebo condition were debriefed regarding their true beverage condition, and participants in the alcohol condition provided another BAC and were informed of their actual BACs. Participants in the no alcohol and placebo conditions were allowed to call for their ride home and leave the lab, whereas those in the alcohol condition prepared to stay in the laboratory for several more hours during which time they could order food and were provided movies and games. Participants were compensated $5/hr toward a maximum of $40, or were given introductory psychology research credits in an amount equal to the number of hours spent in the lab, and all participants were provided a list of campus and community resources for dating aggression and alcohol treatment.

Audio-Taped Stimuli

The same neutral and dating conflict audio-taped scenarios described in Study 1 were used for this study (p. 20). As demonstrated in the previous study, the conflict scenario has adequate construct validity.

Measures (Provided in Appendix C)

Background and Relationship Characteristics

Participants provided their age, gender, ethnicity, SES, length of current relationship, and level of emotional commitment to their current dating partner as in Study 1 (p. 22). Relationship satisfaction was assessed with the Relationship Assessment Scale (RAS; Hendrick, 1988). The RAS is a 7-item measure of global relationship satisfaction (e.g., "How well does your partner meet your needs?"), with items rated on 5-point scales (1 = not at all; 5 = extremely). The RAS has good reliability (Cronbach alpha = .86) and was shown to be applicable to anyone in intimate relationships including dating partners (Vaughn & Baier, 1999).

Typical Alcohol Use, Trait Aggressivity, and Past Dating Aggression

Typical alcohol consumption during the past three months was measured with the Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985), a widely accepted assessment of alcohol consumption. The DDQ asked participants to indicate the typical number of standard drinks (defined as 12 oz of beer, 5 oz of wine, or 1 shot of liquor straight or in a mixed drink) they consumed each day of a typical week during the past 3-months. These numbers were summed to calculate each participant's typical weekly alcohol consumption.

The Buss-Perry Aggression Questionnaire (Buss & Perry, 1992) was used to assess dispositional trait aggressivity. The scale is comprised of four subscales including physical aggression, verbal aggression, anger, and hostility. Participants respond to the 29-items using 5-point Likert scales (1 = very often applies to me to 5 = never or hardly

ever applies to me). For the current study, a total score was calculated by summing the individual items, and has good internal consistency (Cronbach alpha = .90).

The Psychological Aggression and Physical Assault subscales of the revised Conflict Tactics Scale (CTS-2; Straus et al., 1996) were used to assess the participants' perpetration of dating aggression occurring during the past year as in Study 1 (p. 22). For the purposes of this study, the Psychological and Physical Assault subscales were summed to create a composite variable comprising the total frequency of dating aggression perpetrated by the participant in the past year.

Mood Ratings and Subjective Emotional Arousal

A revised version of the Profile of Moods State (POMS; Gabrielli et al., 1991) was administered to assess state affect immediately before and after the presentation of the audio-taped scenarios. In addition to the POMS subscales described in Study 1 (p. 23), participants also rated feelings of intoxication (e.g., flushing, nausea) and neurological affect (e.g., off-balance, impaired driving ability) on 5-point scales (1 = not at all; 5 = extremely) approximately 15- and 60-minutes after finishing their last drink. Items were summed to create the Intoxication and Neurological Affect subscales and have adequate interitem reliabilities (Cronbach's alphas were .66 and .92, respectively).

Subjective emotional arousal was assessed and scored in a manner consistent with the procedures described in Study 1 (p. 23). As previously described, observations from scenario segments in which the peak arousal was 0 were removed prior to calculating the overall average emotional arousal. For the neutral scenario, the observations from 144 segments (12.5% of all possible segments) from 66 participants were removed, whereas for the conflict scenario observations from 54 segments (4.7% of all segments) from 33 participants were removed.

Self-Regulation

Emotion regulation was assessed with the 10-item Emotion Regulation Questionnaire (ERQ; Gross & John, 2003). The ERQ consists of two factors: reappraisal (e.g., I control my emotions by changing the way I think about the situation I'm in) and suppression (e.g., I control my emotions by not expressing them). Items have 7-point response scales (1 = strongly disagree; 4 = neutral; 7 = strongly agree). Internal consistency is good for both the Reappraisal and Suppression subscales (Cronbach alphas of .78 and .75, respectively).

Behavior regulation was assessed with the 13-item Brief Self-Control Scale (B-SCS; Tangney, Baumeister, & Boone, 2004). The B-SCS is designed to evaluate perceptions of self-control along a variety of theoretically derived dimensions (self-control of thoughts, emotions, impulses, and performance) and has demonstrated good internal reliability (Cronbach's alpha = .82).

Due to possible demand characteristics of self-reported measures of self-regulation, a modified version of the Implicit Attitudes Test (Greenwald, McGhee, & Schwartz, 1998), the Emotion Regulation Implicit Attitudes Test (ER-IAT; Mauss, Evers, Wilhelm, & Gross, 2006), was used as an implicit measure of emotion regulation. As part of the ER-IAT, emotion regulation (i.e., suppress, contain, hide, cool, controlled), emotion expression (i.e., disclose, discharge, reveal, emotional, expressive), positive (i.e., good, pleasant, gold, honor, lucky), and negative (i.e., bad, negative, gloom, filth, rotten) words were presented on a computer screen. Similar to other implicit attitude tests, the ER-IAT consisted of five blocks of 20 trials each. Blocks 1, 2, and 4 were provided as practice trials, and Blocks 3 and 5 presented the test trials. Participants were asked to categorize words as being emotion regulation and positive or emotion expression and

negative (Block 3), and then the pairings were reversed and participants were asked to categorize words as either emotion regulation and negative or emotion expression and positive (Block 5) as quickly as possible while keeping errors to a minimum. The ER-IAT was scored following procedures outlined by Greenwald, Nosek, and Banaji (2003) resulting in a difference between the average latencies of Block 3 and 5 average latencies. Positive scores reflect a preference for emotion regulation/positive, whereas negative scores reflect a preference for emotion regulation/negative. The ER-IAT was shown to have convergent and discriminant validity (Mauss et al., 2006).

Articulated Verbal and Physical Aggression

The procedure used to code participants' responses was the same as Study 1 (p. 24). Again, tallies of the articulated verbal and physical aggression intentions were calculated for each segment, and were also summed across segments for a total verbal and physical aggression intention score for both the neutral and conflict scenario. Intraclass correlation coefficients were high for verbal (r_{icc} = .85) and physical (r_{icc} = .95) aggression intentions, indicating good consistency between the coders.

Subjective Intoxication

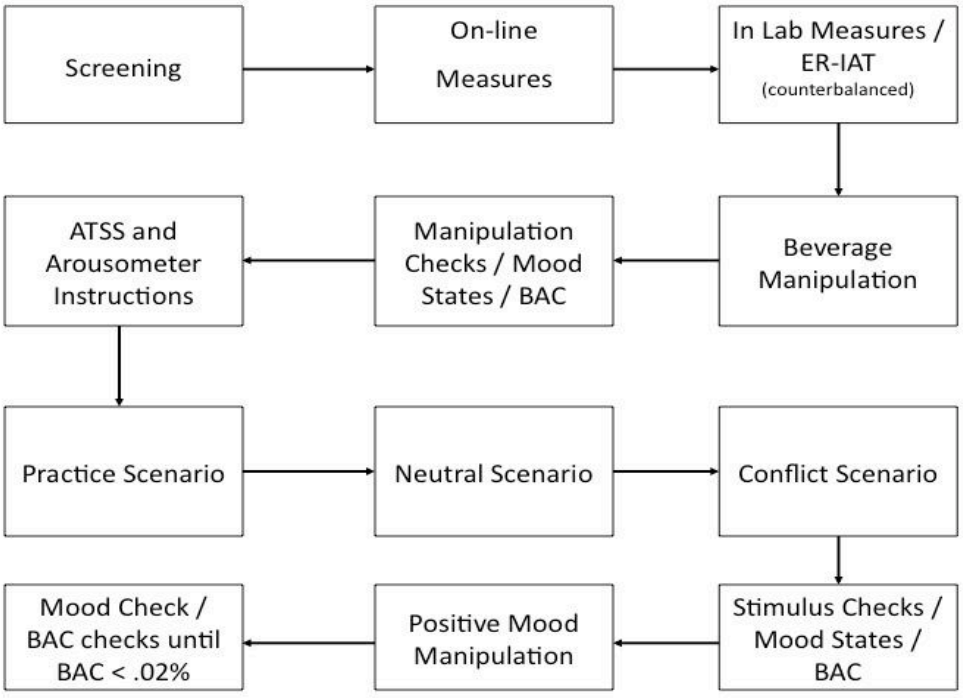
Subjective intoxication was assessed with two visual analog scales for "tipsy/buzzed" and "drunk" on a 0 to 100 rating scale (0 = not at all; 100 = extremely). To assess the stimulant and sedative effects of alcohol often associated with the ascending and descending limbs of the BAC curve, respectively, the 14-item Biphasic Alcohol Effects Scale (BAES; Martin et al., 1993) was administered. For the BAES, participants were asked to rate the extent to which they felt the stimulant (e.g., elated, energized), and sedative (e.g., down, sluggish) sensations on a Likert-type scale (0 = not

at all; 10 = extremely). The Stimulation and Sedation subscales have good internal consistency (Cronbach alphas are .96 and .89, respectively).

Manipulation Checks

Participants provided the estimated number of standard alcohol beverages (defined as 1.5 ounces of liquor) they were served in the experiment. This assessment has been used previously as a check on the effectiveness of the beverage manipulation (e.g., Fromme, Katz, & D'Amico, 1997). Identical to Study 1 (p. 26), participants also reported on the realism, believability, and severity of the neutral and conflict scenarios. In addition, participants rated how good/bad, happy/sad, and angry/calm they felt following the positive mood manipulation identical to Study 1 (p. 26).

Illustration 3.1. Study 2 procedures flow-chart.



Analytic Strategy

Verbal and physical aggression intentions were both modeled with negative binomial distributions as these count data had positively skewed distributions and variances that were greater than the mean. The neutral scenario was always administered before the conflict scenario to provide baseline levels of aggression intentions and emotional arousal. Therefore, all analyses with verbal or physical aggression intentions as the dependent variable included the total aggression intentions to the neutral scenario as a covariate in the equation to control for baseline aggression intentions. Additionally, analyses examining the effects of participants' emotional arousal to the conflict scenario also included emotional arousal to the neutral scenario as a covariate to control for their baseline arousal. In order to include beverage conditions (i.e., alcohol, placebo, no alcohol) as an independent variable in regression equations, this variable was dummy coded into two new variables for the alcohol and placebo conditions with the no alcohol condition serving as the reference condition for both. Therefore, direct or indirect effects of the alcohol condition, for example, are in reference to the no alcohol condition. A dichotomous variable was created for ethnicity to compare the aggression intentions of Whites to non-Whites.

Three primary types of analyses were conducted to address the a priori hypotheses: negative binomial regression analyses, generalized estimating equations, and logistic regression analyses. Negative binomial regression analyses are non-linear regressions that model a negative binomial reference distribution. These analyses provide an incidence rate ratio (IRR), or the change in frequency with which verbal or physical aggression intentions were articulated as a function of another variable (e.g., alcohol intoxication, self-regulation). Negative binomial regression analyses were used

to examine hypotheses regarding the total verbal and physical aggression intentions (i.e., a sum of the verbal or physical aggression intentions articulated after each segment of the conflict scenario). Negative binomial regressions were used to examine the effects of trait aggressivity, past-year dating aggression, ethnicity, and relationship characteristics on the total frequency of verbal and physical aggression intentions.

Generalized estimating equations (GEE; Hardin & Hilbe, 2003) using a negative binomial distribution and a log link function were used to test hypotheses about change in verbal or physical aggression intentions across the eight segments of the conflict scenario. GEE models provide an alternative approach to modeling multilevel data (i.e., repeated observations nested within individuals) when the response variables are non-normally distributed. Like the negative binomial regression analyses, GEE models also provide an IRR. GEE models were conducted to examine the effects of alcohol intoxication, self-regulation, and emotion arousal on verbal and physical aggression intentions across scenario segments.

Lastly, logistic regression analyses were conducted to test hypotheses that alcohol intoxication, self-regulation, and arousal influence the escalation from verbal to physical aggression intentions. For these analyses, the sample was limited to only those individuals who expressed any verbal aggression intentions to the conflict scenario (n = 79). A dichotomized physical aggression intention variable was created based on whether physical aggression intentions occurred during the same or later scenario segment as the first verbal aggression intention (0 = no physical aggression intentions or physical aggression intentions articulated in a scenario segment prior to the first verbal aggression intention; 1 = physical aggression intentions occurring during the same or later scenario segment as the first verbal aggression intention). Therefore, these analyses

provided an assessment of the factors that influenced the escalation from verbal to physical aggression.

For all significant interactions, the influence of possible outliers was examined to determine whether the results were influenced by the responses of only a few participants. This was done by examining the leverage statistic for GEE and negative binomial regression analyses, and the dfbeta statistic for logistic regressions. Data points with a leverage score ≥ 0.5 or a dfbeta score ≥ 1.0 were removed and the analysis rerun. Results did not change suggesting that the possible outliers did not exert undue influence on the significant results.

RESULTS

One participant in the placebo condition was excluded from analyses because she did not believe she consumed alcohol, and 5 participants randomized to the alcohol condition were excluded from analyses because they either admitted to not being in a relationship after their participation was completed ($n = 1$) or they had peak BACs at or below .06% ($n = 4$). Because the pharmacological effects of alcohol on aggression are likely to be different for individuals at .06% BAC than those closer to the targeted .08%, they were dropped from analyses. Therefore, the final sample consisted of 144 participants with 48 (50% female) in the alcohol condition, 48 (52% female) in the placebo condition, and 48 (50% female) in the no alcohol condition.

Table 3.1 shows the demographic and background information for participants in each condition. Differences between those randomized to the alcohol, placebo, and no alcohol conditions on ethnicity and length of time in their current relationships were examined with chi-square analyses. Separate ANOVAs were run to determine differences among participants randomized to the beverage conditions on age, typical

alcohol use, trait aggressivity, and past-year dating aggression. Ethnicity differed across conditions, $\chi^2(10, N = 144) = 19.51$, $p < .05$, with more Whites randomized to the alcohol condition than to the no alcohol or placebo conditions. The length of time participants were in their current relationships did not differ across conditions, $\chi^2(8, N = 144) = 11.57$, $p = .17$. Results of the ANOVA analyses indicated that participants in the alcohol, placebo, and no alcohol conditions did not differ on age, $F(2, 141) = 0.25$, $p = .78$, typical weekly drinking, $F(2, 141) = 0.85$, $p = .43$, trait aggressivity, $F(2, 141) = 0.74$, $p = .48$, or a history of perpetrating dating aggression within the past-year, $F(2, 141) = 1.41$, $p = .25$.

Table 3.1. Means (and Standard Deviations) for Background and Relationship Characteristics, Aggression History, Self-Regulation, Emotional Arousal and Aggression Intentions by Beverage Condition

	Condition			
	Alcohol (n = 48)	Placebo (n = 48)	No Alcohol (n = 48)	Total (N = 144)
	N (%)	N (%)	N (%)	N (%)
Relationship length				
1-3 months	6 (13)	8 (17)	5 (10)	19 (13)
3-6 months	5 (10)	9 (19)	9 (19)	23 (16)
6-12 months	7 (15)	9 (19)	4 (8)	20 (14)
12 or more months	30 (62)	21 (44)	30 (62)	81 (56)
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Age	22.92 (1.98)	23.08 (2.42)	23.24 (2.27)	23.08 (2.22)
Relationship satisfaction	28.40 (4.06)	29.29 (4.73)	27.42 (5.22)	28.37 (4.72)
Relationship commitment	5.50 (1.26)	5.15 (1.57)	4.60 (1.70)	5.08 (1.55)
Typical weekly alcohol use	11.58 (9.89)	10.13 (8.19)	12.56 (9.51)	11.42 (9.22)
Dating aggresssion history	10.02 (13.96)	9.83 (15.58)	14.92 (20.27)	11.59 (16.87)
Trait aggressivity	59.90 (14.58)	56.13 (17.08)	57.53 (14.01)	57.92 (15.25)
Self-Regulation				
Reappraisal	22.35 (4.07)	22.63 (3.99)	23.46 (3.55)	22.81 (3.88)
Suppression	10.19 (3.60)	10.92 (3.07)	9.69 (3.54)	10.26 (3.43)
Self-Control	40.48 (8.48)	42.52 (9.05)	41.67 (7.47)	41.56 (8.34)
ER-IAT	-0.36 (0.42)	-0.29 (0.45)	-0.36 (0.42)	-0.34 (0.43)
Average emotion arousal				
Neutral scenario	0.23 (0.14)	0.18 (0.13)	0.21 (0.14)	0.21 (0.14)
Conflict scenario	0.51 (0.21)	0.51 (0.17)	0.49 (0.19)	0.50 (0.19)
Aggression intentions				
Neutral scenario				
Verbal	0.42 (1.41)	0.29 (1.01)	0.16 (0.56)	0.29 (1.05)
Physical	0.06 (0.43)	0.00 (0.00)	0.00 (0.00)	0.02 (0.25)
Conflict scenario				
Verbal	2.96 (5.58)	1.60 (2.21)	1.17 (1.36)	1.91 (3.61)
Physical	0.44 (0.80)	0.52 (0.99)	0.48 (1.29)	0.48 (1.04)

Note. ER-IAT = Emotion Regulation Implicit Attitudes Test.

Manipulation Checks

Beverage Manipulation

Participants reached an average peak BAC of 0.082% (SD = 0.01) at approximately 60-minutes after they finished their last drink, with no significant differences between the peak BAC of women (M = 0.084, SD = 0.01) compared to men (M = 0.079, SD = 0.01), $t(46) = 1.84$, $p = .07$. As expected, BACs were lower than the peak BACs on the ascending limb (M = 0.066, SD = 0.01), which was assessed 20-minutes post-drinking, and on the descending limb (M = 0.073, SD = 0.00), which was assessed 90-minutes post-drinking. Because the ATSS procedure was completed between the 20- and 60-minute BAC assessments, participants provided their aggression intentions on the ascending limb of the BAC curve as intended.

Next, separate ANOVAs were conducted to assess differences on the POMS subscales for Intoxication and Neurological Effects across the three conditions. ANOVA tests revealed a significant effect of condition (see Table 3.2). Univariate tests indicated that participants in the alcohol condition reported feeling more intoxicated than those in the placebo, $F(1, 93) = 35.34$, $p < .001$, or no alcohol, $F(1, 93) = 67.46$, $p < .001$, conditions, and participants in the placebo condition reported greater intoxication than those in the no alcohol condition, $F(1, 94) = 20.88$, $p < .001$. Participants in the alcohol condition also experienced more neurological effects of alcohol than those in the placebo, $F(1, 93) = 44.27$, $p < .001$, and no alcohol, $F(1, 93) = 70.95$, $p < .001$, conditions. Similarly, those in the placebo condition reported more neurological effects of alcohol than individuals in the no alcohol condition, $F(1, 94) = 11.92$, $p < .001$.

Similar ANOVAs also suggested that there was a significant effect of condition on the number of standard drinks participants thought they were served, and their subjective levels of intoxication (see Table 3.2). Again, univariate tests found that participants who received alcohol reported consuming more standard drinks than those in the placebo, $F(1, 94) = 17.74$, $p < .001$, or no alcohol, $F(1, 94) = 186.49$, $p < .001$, conditions, and participants in the placebo condition believed they were served more drinks than those in the no alcohol condition, $F(1, 94) = 354.81$, $p < .001$. Participants who consumed alcohol also reported greater levels of feeling tipsy or buzzed than those who received placebo, $F(1, 94) = 120.04$, $p < .001$, or no alcohol, $F(1, 94) = 284.88$, $p < .001$, and increased feelings of being drunk that those in the placebo, $F(1, 94) = 94.76$, $p < .001$, or no alcohol, $F(1, 94) = 133.75$, $p < .001$, conditions. Compared to those in the no alcohol condition, participants in the placebo condition reported greater feelings of being tipsy/buzzed, $F(1, 94) = 76.74$, $p < .001$, and increased feelings of intoxication, $F(1, 94) = 21.60$, $p < .001$.

Table 3.2. Subjective Intoxication and Beverage Manipulation Checks by Beverage Conditions

	Condition			
Variable	Alcohol Mean (*SD*)	Placebo Mean (*SD*)	No Alcohol Mean (*SD*)	ANOVA Statistics
POMS subscales				
Intoxication	13.96 (5.40)	8.98 (2.10)	7.44 (1.03)	$F(2, 140) = 48.16$***
Neurological effects	9.13 (4.18)	4.83 (1.58)	4.04 (0.20)	$F(2, 140) = 53.85$***
No. standard drinks	3.81 (1.86)	2.57 (0.81)	0.06 (0.43)	$F(2, 141) = 122.70$***
Subjective intoxication				
Tipsy/buzzed	54.53 (21.98)	15.69 (11.27)	1.29 (1.60)	$F(2, 141) = 180.44$***
Drunk	39.64 (23.02)	6.40 (6.80)	1.50 (2.66)	$F(2.141) = 109.29$***

Note. POMS = Profile of Mood States; No. standard drinks = the number of standard drinks that participants estimated having consumed during the beverage administration.
**$p < .01$; ***$p < .001$.

Stimulus Manipulation

Consistent with Study 1, participants reported that the scenarios were believable (Neutral M = 3.72, SD = 1.09; Conflict M = 3.66, SD = 0.98) and realistic (Neutral M = 3.50, SD = 1.06; Conflict M = 3.52, SD = 0.93), and these ratings did not differ between the neutral and conflict scenarios (p's > .05). In comparison to the neutral scenario, participants also indicated that the conflict scenario depicted more serious (Neutral M = 2.06, SD = 0.98; Conflict M = 4.74, SD = 0.54; $t(143) = 28.47$, $p < .001$) and severe (Neutral M = 1.25, SD = 0.61; Conflict M = 4.66, SD = 0.56; $t(143) = 48.25$, $p < .001$) conflict between the dating partners.

A paired samples t-test examined differences between the average levels of subjective arousal reported to the neutral and conflict scenarios. Participants reported greater average emotional arousal to the conflict (M = 0.50, SD = 0.19) than the neutral (M = 0.21, SD = 0.14) scenario, $t(141) = 21.31$, $p < .001$. Differences on the mean arousal ratings among the beverage conditions were examined with a multinomial logistic regression with the mean for the conflict and neutral scenarios entered as independent variables and condition as the dependent variable. Compared to the alcohol condition, no differences were observed on mean arousal to the conflict scenario for the placebo, b = 1.41, OR = 4.11, p = .29, or no alcohol, b = -0.12, OR = 0.88, p = .92, conditions. Participants in the placebo condition, however, had significantly lower average arousal to the neutral scenario (M = 0.18, SD = 0.13) than those in the alcohol condition (M = 0.23, SD = 0.14), β = -3.72, OR = 0.02, p < .05, with no differences between the alcohol and no alcohol conditions on arousal to the neutral scenario, β = -0.97, OR = 0.38, p = .59.

Differences in participants' mood states before and after completion of the ATSS procedure were examined using paired samples t-tests (Table 3.3). Participants reported

increased feelings of tension and anxiety, $t(142) = 5.51$, $p < .001$, hostility, $t(142) = 6.39$, $p < .001$, and depression, $t(142) = 2.90$, $p < .01$, and decreased feelings of energy, $t(142) = -2.82$, $p < .01$, and friendliness, $t(142) = -6.25$, $p < .001$, after completing the ATSS procedure compared to immediately before completing the ATSS procedure. There were no significant changes in their reported problems concentrating, $t(142) = 0.40$, $p = .69$. Similar t the results of Study 1, the conflict scenario appeared to have the desired effect of eliciting negative mood states and reducing positive affect across conditions.

Table 3.3. Mood States Before and After the Presentation of the ATSS Procedure

	Pre-ATSS Mean (*SD*)	Post-ATSS Mean (*SD*)	*t*
POMS subscales			
Tension and anxiety	4.55 (1.09)	5.52 (2.18)	5.51***
Hostility	5.13 (0.65)	6.66 (2.99)	6.39***
Depression	4.22 (0.90)	4.60 (1.54)	2.90**
Energetic	14.76 (2.81)	14.13 (2.62)	-2.82**
Friendliness	15.08 (3.51)	13.57 (3.97)	-6.25***
Concentration problems	5.74 (2.41)	5.80 (2.67)	-0.40

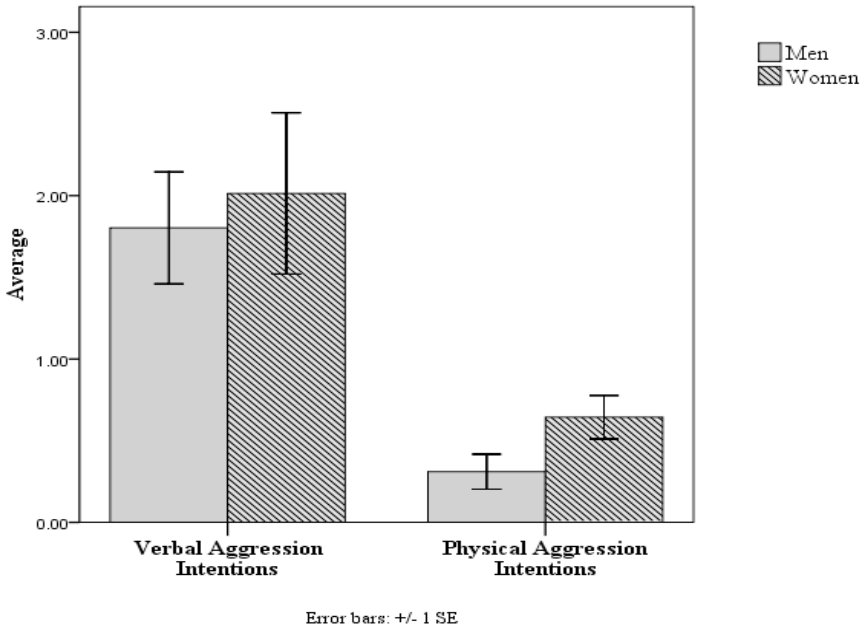
Note. ATSS = Articulated Thoughts in Simulated Situations; POMS = Profile of Mood States; The POMS subscales have a possible range of 4-20.
**$p < .01$; ***$p < .001$.

Verbal and Physical Aggression intentions

Overall, the conflict scenario elicited more verbal aggression intentions ($M = 1.91$, $SD = 3.61$) than the neutral scenario ($M = 0.29$, $SD = 1.05$), $t(143) = 5.57$, $p < .001$. Similarly, participants expressed more physical aggression intentions in response to the conflict scenario ($M = 0.48$, $SD = 1.04$) than the neutral scenario ($M = 0.02$, $SD = 0.25$), $t(143) = 5.11$, $p < .001$. As shown in Figure 3.1, men ($M = 0.31$, $SD = 0.90$) and women ($M = 0.64$, $SD = 1.13$) differed on their physical aggression intentions to the conflict

scenario, $t(142) = 1.97$, $p < .05$, but not on their verbal aggression intentions, $t(142) = 0.35$, $p = .73$. Therefore, gender will be statistically controlled by entering it as a covariate in analyses with physical aggression intentions as the dependent variable.

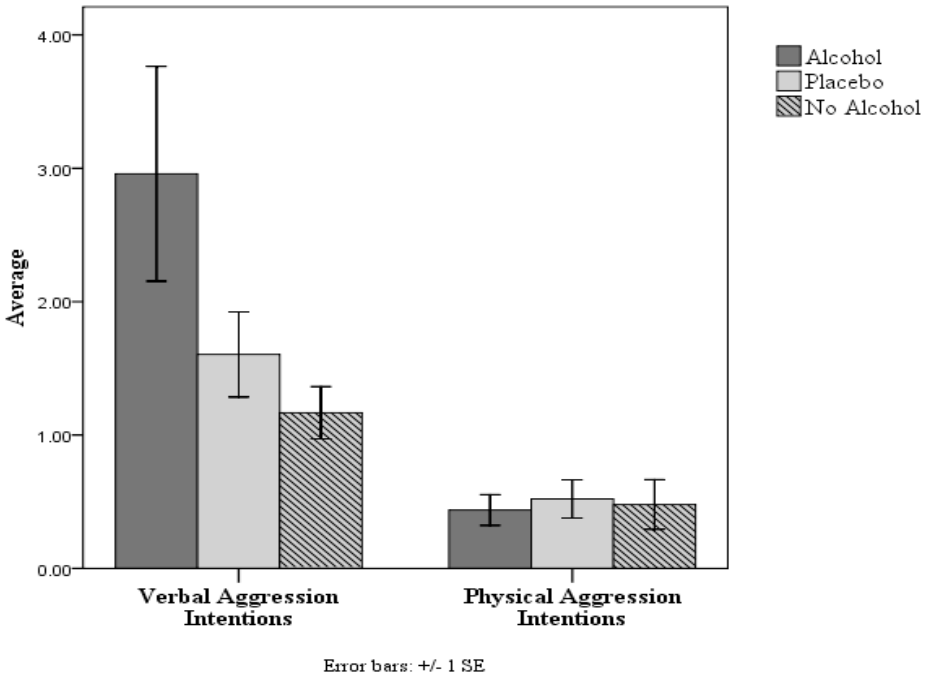
Figure 3.1. Average Verbal and Physical Aggression Intentions for Men and Women



To determine overall differences on aggression intentions among the beverage conditions, separate ANOVAs were conducted for verbal and physical aggression intentions to the conflict scenario. There was a significant effect of beverage condition for verbal aggression intentions, $F(2, 141) = 3.32$, $p < .05$, with univariate tests indicating a significant difference between the alcohol and no alcohol conditions, $F(1, 94) = 4.67$, $p < .05$. Participants in the alcohol condition articulated more verbal aggression intentions than those in the no alcohol condition (Figure 3.2). There were no significant differences between the alcohol condition and the placebo, $F(1, 94) = 2.44$, $p = .12$, and the placebo did not differ from the no alcohol condition, $F(1, 94) = 1.37$, $p = .25$. There were no

differences among the beverage conditions on physical aggression intentions, $F(2, 141) = 0.08$, $p = .93$.

Figure 3.2. Average Verbal and Physical Aggression Intentions by Beverage Condition



The Effects of Alcohol Intoxication on Aggression Intentions (Hypothesis 1)

Differences among participants in the alcohol, placebo, and no alcohol conditions across the eight segments of the conflict scenario were assessed with separate GEE models for verbal and physical aggression intentions (Hypothesis 1a). Alcohol intoxication was expected to be associated with more aggression intentions, especially among those with poor self-regulation. Therefore, the main effects of beverage conditions, scenario segments, reappraisal, and suppression, along with the respective two- and three-way interactions among beverage conditions, self-regulation, and scenario

segments were examined (Table 3.4).[1,2] For verbal aggression, there was a significant interaction between alcohol and scenario segment, b = 0.32, p < .01, such that participants in the alcohol condition significantly increased their verbal aggression intentions across the scenario segments compared to those in the no alcohol condition (Figure 3.3). There was also a significant interaction between the placebo condition and emotion suppression, b = -1.02, p < .05 (Figure 3.4). Low suppressing individuals in the placebo condition articulated more verbal aggression intentions than those in the no alcohol condition; however, those better able to suppress their emotions in the placebo condition articulated fewer verbal aggression intentions than those in the no alcohol condition. No significant main effects existed for scenario segments, reappraisal, suppression, or interactions between beverage conditions, scenario segments, and reappraisal (all p's > .05).

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[1] All analyses for self-regulation were initially conducted with self-control, reappraisal and suppression. Self-control did not exert a significant main effect or interaction in any of the analyses and was therefore dropped from the analyses for parsimony.

[2] All analyses involving self-regulation were also run separately for the explicit measures of reappraisal and suppression and for the implicit measure of emotion regulation (i.e., ER-IAT). There were no significant effects of the ER-IAT in any of the analyses, so these analyses were removed for parsimony.

Table 3.4. The Effects of Alcohol Intoxication and Self-Regulation on Verbal and Physical Aggression Intentions Across Scenario Segments

	Verbal Aggression Intentions		Physical Aggression Intentions	
Variable	*b*	*IRR* (95% C.I.)	*b*	*IRR* (95% C.I.)
Neutral aggression intentions	0.19***	1.21 (1.11, 1.33)	0.22***	1.25 (1.10, 1.41)
Gender	--		0.81**	2.25 (1.23, 4.10)
Scenario segment (SEG)	-0.23	0.80 (0.65, 0.97)	0.54**	1.72 (1.20, 2.48)
Alcohol (ALC)	-0.27	0.76 (0.29, 2.02)	0.06	1.06 (0.04, 31.40)
Placebo (PL)	-0.27	0.76 (0.27, 2.14)	1.03	2.80 (0.14, 56.87)
Reappraisal	0.55	1.73 (0.79, 3.80)	1.05	2.85 (0.23, 35.92)
Suppression	-0.03	0.97 (0.49, 1.93)	0.70	2.01 (0.25, 15.70)
ALC x SEG	0.32**	1.38 (1.10, 1.72)	-0.03	0.97 (0.67, 1.39)
PL x SEG	0.19	1.21 (0.95, 1.54)	-0.12	0.89 (0.59, 1.59)
Reappraisal x suppression	0.29**	1.33 (1.11, 1.60)	0.22	1.25 (0.90, 1.73)
ALC x reappraisal	-0.49	0.61 (0.23, 1.61)	-1.75	0.17 (0.02, 6.61)
PL x reappraisal	-0.38	0.68 (0.24, 1.89)	-1.90	0.15 (0.01, 2.92)
ALC x suppression	-0.04	0.96 (0.40, 2.34)	-0.58	0.56 (0.57, 1.38)
PL x suppression	-1.02*	0.36 (0.13, 1.00)	-0.91	0.40 (0.03, 9.89)
Reappraisal x SEG	0.06	1.06 (0.88, 1.23)	-0.04	0.96 (0.68, 1.24)
Suppression x SEG	-0.01	1.00 (0.85, 1.18)	-0.08	0.92 (0.68, 1.24)
ALC x reappraisal x SEG	-0.09	0.91 (0.74, 1.13)	0.12	1.13 (0.71, 1.82)
PL x reappraisal x SEG	-0.12	0.89 (0.71, 1.12)	0.17	1.19 (0.77, 1.84)
ACL x suppression x SEG	0.01	1.00 (0.83, 1.21)	0.01	1.01 (0.67, 1.53)
PL x suppression x SEG	0.19	1.21 (0.97, 1.51)	0.10	1.11 (0.73, 1.68)

Note. IRR = Incidence Rate Ratio; The no alcohol condition is the reference category for the alcohol and placebo conditions.
*$p < .05$; **$p < .01$; ***$p < .001$.

Figure 3.3. Verbal Aggression Intentions Across Scenario Segments by Beverage Condition

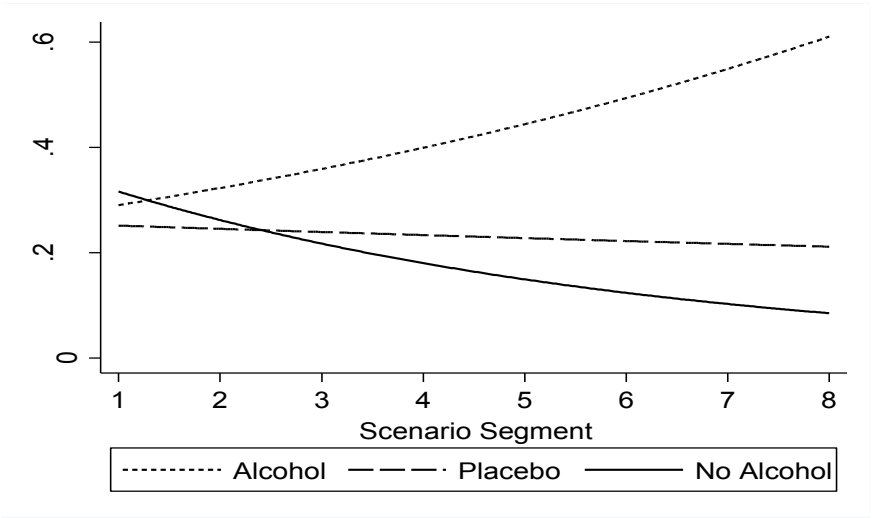
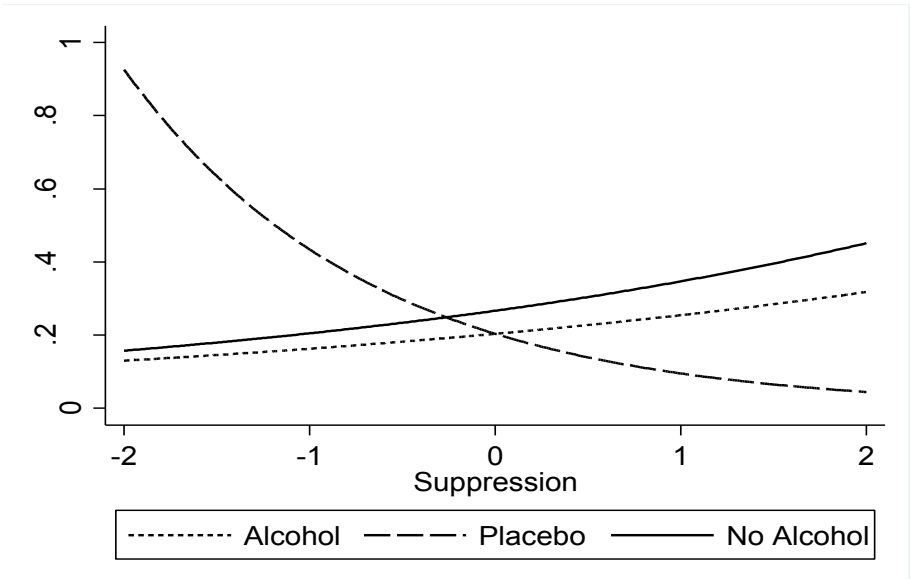
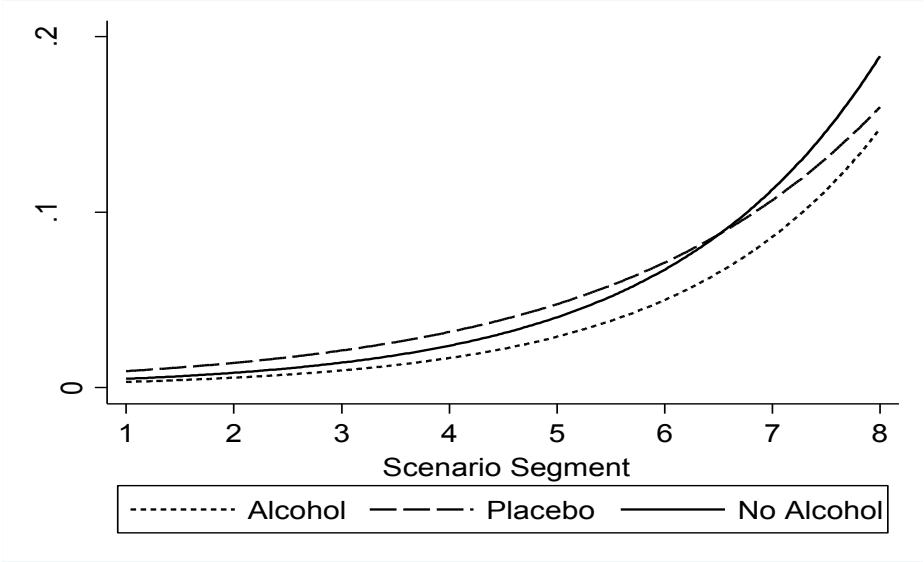


Figure 3.4. Emotion Suppression and Beverage Condition Predict Verbal Aggression Intentions



Also shown in Table 3.4, there was a significant main effect of scenario segment on physical aggression intentions, $b = 0.54$, $p < .01$, with the frequency of physical aggression intentions increasing across scenario segments regardless of beverage condition (Figure 3.5). There were no significant main effects of beverage conditions, reappraisal, suppression, or their interactions on physical aggression intentions (all p's > .05). These findings provide partial support for Hypothesis 1a in that verbal aggression intentions increased across scenario segments for those who consumed alcohol compared to no alcohol, however, physical aggression intentions increased across scenario segments for all participants. The change in verbal and physical aggression across scenario segments was not moderated by self-regulation.

Figure 3.5. Physical Aggression Intentions Across Scenario Segments by Beverage Condition



Next, GEE models examined the hypothesis that verbal aggression intentions would be associated with the occurrence of physical aggression intentions (Hypothesis 1b). These effects were expected to be stronger among participants who consumed

alcohol (verbal aggression intention x beverage condition interaction) and for individuals with poorer self-regulation (verbal aggression intention x self-regulation interaction). In the first model, verbal aggression intentions, beverage conditions, scenario segments, and the two- and three-way interactions between verbal aggression intentions and beverage conditions across scenario segments were entered as independent variables (Table 3.5). As previously shown for Hypothesis 1a, there was a significant main effect of scenario segment, $b = 0.53$, $p < .001$, however there were no significant direct or indirect effects of verbal aggression intentions on participants' articulated physical aggression intentions (all p's > .05). In the second GEE model, verbal aggression intentions, self-regulation, and their interactions across the scenario segments were entered as independent variables. As shown in Table 3.6, there were no significant main effects of verbal aggression intentions, reappraisal, suppression, scenario segments, and their interactions did not significantly predict physical aggression intentions (all p's > .05). Therefore, no support was found for Hypothesis 1b.

Table 3.5. The Influence of Verbal Aggression Intentions and Beverage Conditions on Physical Aggression Intentions Across Scenario Segments

	Physical Aggression Intentions		
Variable	*b*	*p*-value	IRR (95% C.I.)
Neutral aggression intentions	0.15	.016	1.16 (1.03, 1.32)
Gender	0.79	.008	2.20 (1.23, 3.93)
Scenario segment (SEG)	0.53	.000	1.70 (1.29, 2.26)
Alcohol (ALC)	0.12	.928	1.13 (0.08, 16.95)
Placebo (PL)	0.05	.970	1.05 (0.06, 17.73)
Total verbal aggression intentions (VA)	0.02	.913	1.25 (0.21, 72.50)
ALC x SEG	-0.10	.631	0.91 (0.61, 1.35)
PL x SEG	-0.06	.792	0.95 (0.62, 1.43)
VA x SEG	0.13	.669	1.14 (0.63, 2.07)
VA x ALC	-0.94	.669	0.39 (0.01, 29.30)
VA x PL	1.52	.514	4.56 (0.05, 43.72)
VA x ALC x SEG	-0.01	.995	1.00 (0.53, 1.87)
VA x PL x SEG	-0.25	.469	0.78 (0.40, 1.53)

Note. IRR = Incidence Rate Ratio; The alcohol and placebo condition effects are in comparison to the no alcohol condition.

Table 3.6. The Influence of Verbal Aggression Intentions and Self-Regulation on Physical Aggression Intentions Across Scenario Segments

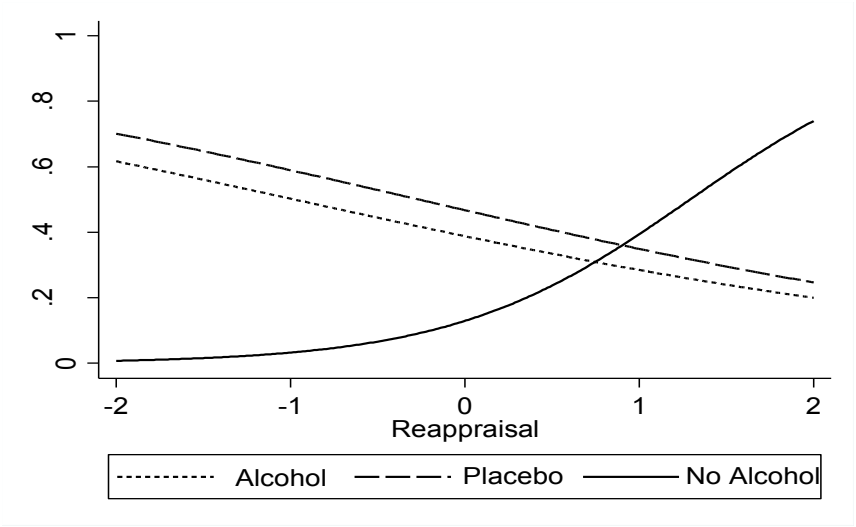
	Physical Aggression Intentions		
Variable	*b*	*p*-value	IRR (95% C.I.)
Neutral aggression intentions	0.18	.003	1.20 (1.06, 1.34)
Gender	0.71	.023	2.04 (1.10, 3.77)
Scenario segment (SEG)	0.44	.000	1.55 (1.32, 1.82)
Reappraisal	-0.45	.429	0.63 (0.21, 1.95)
Suppression	0.01	.993	1.01 (0.34, 2.96)
Total verbal aggression intentions (VA)	0.14	.776	1.15 (0.43, 3.07)
Reappraisal x suppression	0.10	.527	1.11 (0.81, 1.51)
Reappraisal x SEG	0.11	.222	1.11 (0.94, 1.32)
Suppression x SEG	-0.01	.882	0.99 (0.84, 1.16)
VA x reappraisal	0.01	.987	1.01 (0.25, 4.15)
VA x suppression	0.40	.396	1.49 (0.59, 3.78)
VA x SEG	0.02	.817	1.02 (0.88, 1.18)
VA x reappraisal x SEG	-0.02	.827	0.98 (0.79, 1.20)
VA x suppression x SEG	-0.04	.549	0.96 (0.83, 1.10)

Note. IRR = Incidence Rate Ratio; The no alcohol and placebo condition effects are in comparison to the alcohol condition.

A logistic regression analysis next tested the hypothesis that alcohol intoxication would be associated with the escalation from verbal to physical aggression intentions and that this effect would be stronger for those with poorer self-regulation (Hypothesis 1c). The sample was limited to participants who expressed at least one verbal aggression intention to the conflict scenario (n = 79), the dichotomized physical aggression intentions was entered as the dependent variable, and beverage conditions, reappraisal, suppression, and the two-way interactions between beverage conditions and reappraisal and suppression were entered as independent variables. Reappraisal interacted with the alcohol condition compared to the no alcohol condition, $b = -1.72$, Wald $\chi^2 = 4.13$ (df = 1), $p < .05$. As shown in Figure 3.6, compared to those in the alcohol condition, the likelihood of physical aggression intentions increased as reappraisal increased for

participants in the no alcohol condition. There were no significant main effects of beverage conditions, suppression, or their interactions (all p's > .05). Hypothesis 2a was partially supported because self-regulation moderated the effect of beverage condition on physical aggression intentions, however, the relation is again inconsistent with the hypothesized effect of alcohol intoxication.

Figure 3.6. Reappraisal and Beverage Condition Predicts the Likelihood of Physical Aggression Intentions Among Individuals Who Expressed Verbal Aggression Intentions



The Effects of Self-Regulation and Emotional Arousal on Aggression Intentions (Hypothesis 2)

To determine whether poor self-regulation was associated with greater emotional arousal (Hypothesis 2a), a linear regression analysis was conducted with reappraisal and suppression entered as independent variables predicting mean emotional arousal to the conflict scenario. Suppression significantly predicted mean arousal, t = -2.03, p < .05, whereas reappraisal, t = -0.04, p = .97, did not. As expected, individuals who were less

able to suppress their emotions reported greater subjective emotional arousal to the conflict scenario.

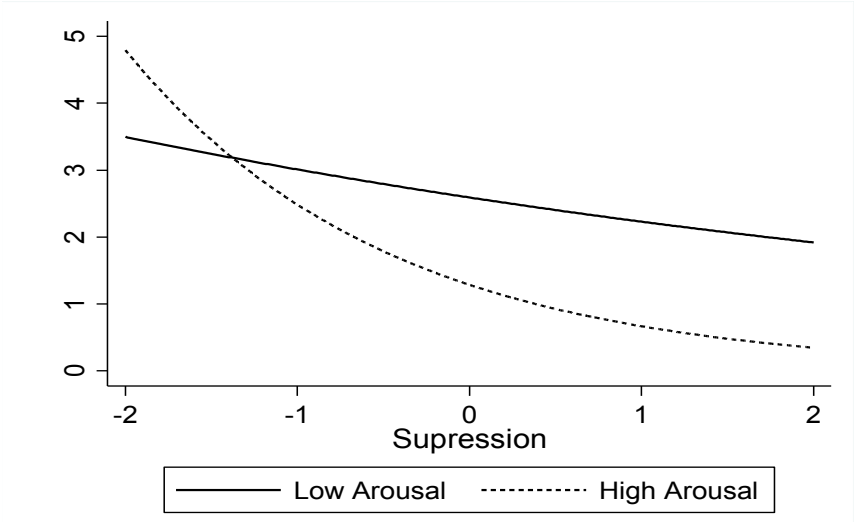
Poor self-regulation was hypothesized to be associated with more aggression intentions, an effect that would be greater among individuals with greater emotional arousal (Hypothesis 2b). Separate negative binomial regression analyses were conducted for verbal and physical aggression intentions with reappraisal, suppression, emotional arousal, and the interactions between both self-regulation variables and arousal entered as independent variables (Table 3.7). For verbal aggression intentions, there were significant main effects of suppression, b = -0.39, IRR = 0.68 (95% C.I. 0.53, 0.88), p < .01, and arousal, b = -0.35, IRR = 0.70 (95% C.I. 0.53, 0.93), p < .05, that were superseded by a significant interaction between suppression and arousal, b = -0.27, IRR = 0.76 (95% C.I. 0.61, 0.94), p < .05. As shown in Figure 3.7, at lower levels of suppression, individuals who experienced greater emotional arousal articulated more verbal aggression intentions compared to those with lower emotional arousal. At higher levels of suppression, however, individuals with higher arousal articulated less verbal aggression intentions than those with lower arousal. For physical aggression intentions, neither the main effects of reappraisal, suppression, and arousal, nor their interactions were significant (all p's > .05). Therefore, partial support was found for Hypothesis 2b with respect to verbal aggression intentions, but not physical aggression intentions.

Table 3.7. The Influence of Self-Regulation and Emotional Arousal on Verbal and Physical Aggression Intentions

	Verbal Aggression Intentions		Physical Aggression Intentions	
Variable	*b*	*IRR* (95% C.I.)	*b*	*IRR* (95% C.I.)
Neutral aggression intentions	0.22*	1.25 (1.04, 1.50)	0.46**	1.59 (1.17, 2.16)
Neutral arousal	3.32***	27.73 (4.31, 17.84)	-0.28	0.76 (0.03, 18.11)
Gender	--	--	0.94*	2.55 (1.08, 6.03)
Reapprsaisal	0.10	1.11 (0.88, 1.40)	0.21	1.23 (0.83, 1.84)
Suppression	-0.35**	0.70 (0.54, 0.90)	-0.10	0.91 (0.62, 1.32
Emotional arousal	-0.24	0.79 (0.59, 1.05)	0.12	1.12 (0.65, 1.94)
Reappraisal x suppression	0.31*	1.36 (1.07, 1.72)	0.10	1.11 (0.75, 1.64)
Reappraisal x arousal	0.10	1.11 (0.89, 1.38)	0.21	1.23 (0.81, 1.86)
Suppression x arousal	-0.34**	0.71 (0.57, 0.89)	0.09	1.09 (0.76, 1.58)

Note. IRR = Incidence Rate Ratio.
*p < .05; **p < .01; ***p < .001.

Figure 3.7. Emotion Suppression and Arousal Predict Verbal Aggression Intentions



Next, a logistic regression analysis assessed the hypothesis that poor self-regulation would be associated with an escalation from verbal to physical aggression intentions, an effect that would be stronger among those with greater emotional arousal (Hypothesis 2c). Reappraisal, suppression, emotional arousal, and the two-way interactions between both self-regulation variables and arousal were entered as independent variables. Among those individuals who articulated any verbal aggression intentions, neither the main effects nor the interactions significantly predicted physical aggression intentions (all p's > .05) suggesting that self-regulation and arousal did not predict physical aggression intentions. Thus, no support was found for Hypothesis 2c.

Trait Aggressivity, Past-Year Dating Aggression, and Aggression Intentions (Hypothesis 3)

Trait Aggressivity

Separate negative binomial regression analyses for verbal and physical aggression intentions assessed the hypothesis that higher trait aggressivity would be associated with greater aggression intentions (Hypothesis 3a). This effect was expected to be stronger when participants had consumed alcohol (trait aggressivity x alcohol interaction) and when they had lower self-regulation (trait aggressivity x self-regulation interaction). In the first set of analyses, trait aggressivity, beverage condition, and their interactions were entered as independent variables. Neither the main effect of beverage conditions, trait aggressivity or the interactions between beverage conditions and trait aggressivity were significant for verbal or physical aggression intentions (all p's > .05). Although trait aggressivity did not exert a direct or indirect effect on aggression intentions in this model,

the addition of trait aggressivity to the model rendered non-significant the previously significant main effect of no alcohol found for Hypothesis 1a.

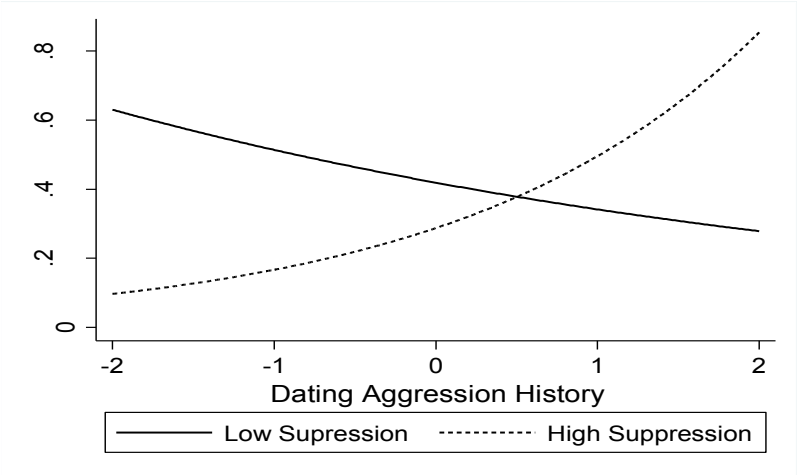
In the second set of negative binomial regression analyses, trait aggressivity, reappraisal, suppression, and the interactions between trait aggressivity and reappraisal and suppression were entered as independent variables. Neither the main effects of trait aggressivity, reappraisal, and suppression, nor their interactions were significant predictors of verbal aggression intentions (all p's > .05). For physical aggression intentions, a significant main effect of trait aggressivity, $b = 0.43$, $IRR = 1.54$ (95% C.I. 1.08, 2.20), $p < .05$, indicated that the frequency of physical aggression intentions increased as trait aggressivity increased. The main effects of reappraisal and suppression, and their interactions with trait aggressivity were all non significant (all p's > .05). Partial support was found for Hypothesis 3a, as trait aggressivity was associated with more physical aggression intentions.

Past-Year Dating Aggression

Negative binomial regression analyses tested the hypothesis that a greater frequency of past-year dating aggression would be associated with more aggression intentions, especially among those with poorer self-regulation (Hypothesis 3b). Past-year dating aggression, reappraisal, suppression, and their interactions were entered as independent variables. Neither the main effects of past-year dating aggression, reappraisal and suppression, nor the interactions between past-year dating aggression, reappraisal, and suppression were significant predictors of verbal aggression intentions (all p's > .05). For physical aggression intentions, the interaction between suppression and past-year dating aggression was significant, $b = 0.41$, $IRR = 1.51$ (95% C.I. 1.08, 2.11), $p < .05$ (Figure 3.8). Individuals with less frequent dating aggression within the

past year and who were low in suppression articulated more physical aggression intentions than those high in suppression, whereas individuals with more frequent past-year dating aggression who were high in suppression articulated more physical aggression intentions than those low in suppression. The main effects of reappraisal, suppression, and past-year dating aggression, as well as the interaction between past-year dating aggression and reappraisal were not significant (all *p*'s > .05). Hypothesis 3b was therefore supported for physical aggression intentions but not for verbal aggression intentions.

Figure 3.8. Emotion Suppression and Past-Year Dating Aggression Predict Physical Aggression Intentions



Ethnicity, Relationship Characteristics, and Aggression Intentions (Hypothesis 4)

Ethnicity

The hypothesis that non-Whites would report more aggression intentions than Whites was examined with separate negative binomial regression analyses for verbal and

physical aggression intentions with the dichotomous ethnicity variable entered as the independent variable in the equation (Hypothesis 4a). There was not a significant main effect of ethnicity on verbal or physical aggression intentions (all p's > .05).[3] Thus, Hypothesis 4a was not supported, as there were no differences between Whites and non-Whites on their aggression intentions.

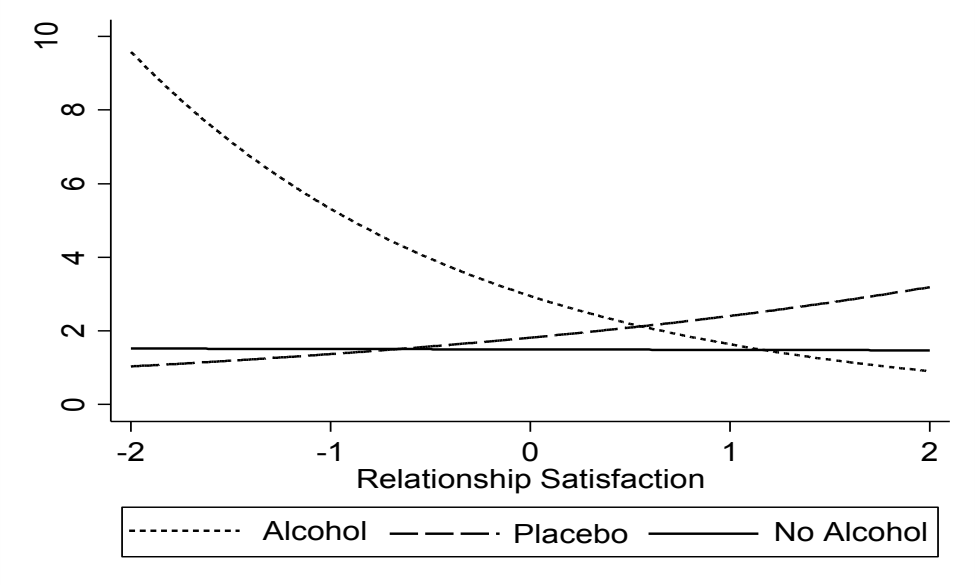
Relationship Characteristics

It was hypothesized that lower relationship satisfaction would be associated with more aggression intentions and that this relation would be stronger among intoxicated individuals (Hypothesis 4b). Relationship satisfaction, beverage conditions, and their interactions were entered as independent variables in separate negative binomial regression analyses for verbal and physical aggression intentions. For verbal aggression intentions, there was a significant main effect of the alcohol condition, $b = 0.68$, Wald $\chi^2 = 5.50$ (df = 1), $p < .05$, which was superseded by a significant interaction between relationship satisfaction and alcohol, $b = -0.58$, Wald $\chi^2 = 4.80$ (df = 1), $p < .05$. As seen in Figure 3.9, at low levels of relationship satisfaction, individuals in the alcohol condition were more likely to articulate verbal aggression intentions compared to the no alcohol condition, but the frequency of their verbal aggression intentions decreased as relationship satisfaction increased. The main effects for relationship satisfaction, the placebo condition, and their interaction were not significant ($p > .05$). For physical aggression intentions, none of the main effects of relationship satisfaction, beverage conditions, or their interactions were significant (all p's > .05), suggesting that participants' satisfaction in their current relationship was not associated with their

[3] The ethnicity analyses were rerun excluding Asian participants (n = 24) with identical results, p's > .05.

physical aggression intentions. Hypothesis 4b was partially confirmed as lower relationship satisfaction predicted verbal aggression intentions for those in the alcohol compared to no alcohol conditions.

Figure 3.9. Relationship Satisfaction by Beverage Condition Predicts Verbal Aggression Intentions



Greater relationship commitment, especially among intoxicated individuals, was expected to be associated with more verbal and physical aggression intentions (Hypothesis 4c). Neither the main effects of relationship commitment or beverage conditions nor their interactions significantly predicted verbal or physical aggression intentions (all p's > .05). Therefore, relationship commitment did not influence the aggression intentions and Hypothesis 4c was not supported.

DISCUSSION

Overall, the beverage manipulation was successful as participants randomized to the alcohol or placebo conditions reported greater subjective intoxication, neurological effects of alcohol, and believed they were served more drinks than those in the no alcohol condition. Participants who received alcohol achieved a peak BAC of .082% approximately 60-minutes after they finished their last drink. Thus, participants completed the ATSS procedure on the ascending limb of the BAC curve, which has been associated with the stimulant effects of alcohol and increased aggressive behavior (Giancola & Zeichner, 1997; Holdstock & de Wit, 1998; Martin et al., 1993).

Similar to Study 1, the conflict scenario was perceived as more severe and serious than the neutral scenario, whereas there were no differences with respect to the realism or believability of the two scenarios. Participants also reported a greater average emotional arousal to the conflict than the neutral scenario. Additionally, changes in mood states similar to Study 1 were observed following the presentation of the neutral and conflict scenarios, with increases in negative mood states such as hostility, tension, and anxiety, and decreases in positive mood states such as friendliness.

Alcohol Intoxication and Aggression Intentions

Overall, participants in the alcohol condition articulated more verbal aggression intentions and had a greater increase in the frequency of their verbal aggression intentions across the scenario segments compared to those who received no alcohol (Hypothesis 1a). There were no differences between those who received placebo versus no alcohol on the articulation of verbal aggression intentions or the change in verbal aggression across the scenario segments. These findings suggest that the overall effect of alcohol on verbal

aggression intentions was associated with its pharmacological effects. Alcohol intoxication likely influenced the cognitive processes that individuals would otherwise use to inhibit behavioral responses, leading to an increase in aggression intentions.

No differences were observed among beverage conditions on physical aggression intentions, as all participants increased their frequency throughout the scenario. Although alcohol did not exert an influence on physical aggression intentions in the current investigation, the overall frequency of physical aggression intentions was low for all participants. The increase in physical aggression intentions as the conflict scenario escalated from verbal to physical aggression suggests that the limited physical aggression that was expressed by participants may have been in response to this escalation.

Alcohol expectancy effects were observed with regards to the influence of emotion suppression on verbal aggression intentions. Compared to those who did not expect or receive alcohol, individuals who received placebo and were less able to suppress their emotions articulated more verbal aggression intentions. Those who received placebo held expectations about how alcohol would affect their behavior without the pharmacological impairments of alcohol. Therefore, those who received placebo and were better able to suppress may have worked harder at suppressing their emotions because of the anticipated effects of alcohol, whereas those less able to suppress their emotions may have articulated more aggressive statements because of the commonly endorsed expectation that alcohol leads to aggression (e.g., Critchlow, 1983).

Contrary to hypotheses, verbal aggression intentions did not predict the occurrence of physical aggression intentions, and neither alcohol intoxication nor self-regulation moderated the effect of verbal on physical aggression intentions (Hypothesis 1b). Although surprising, this could be related to the low frequency of physical

aggression intentions and may reflect participants' reluctance to express socially unacceptable behavior in the laboratory. Higher rates of verbal aggression intentions were observed, perhaps because articulating insulting or demeaning comments is more acceptable than indicating an intention to physically hurt another person.

The likelihood of verbal aggression intentions escalating to physical aggression intentions was influenced by beverage condition and reappraisal (Hypothesis 1c). Among individuals who expressed verbal aggression intentions and were in the no alcohol condition, the likelihood of escalating to physical aggression intentions increased as their ability to reappraise their thoughts and emotions increased. As previously described, this effect may be related to a difference in the techniques implemented based on whether or not individuals expected that the effects of alcohol would interfere with their ability to engage in regulatory processes. On the other hand, those who did not expect alcohol may not have engaged in reappraisal to the same degree and were therefore more likely to escalate to physical aggression.

Self-Regulation, Emotional Arousal, and Aggression Intentions

Consistent with study hypotheses, individuals who were less able to suppress their emotions reported greater emotional arousal to the conflict scenario than those better able to suppress their emotions (Hypothesis 2a). This suggests that the regulatory process of emotion suppression does reduce one's emotional arousal, at least in response to the more immediate effects of a distressing situation. The ability to reappraise one's thoughts, however, did not influence emotional arousal, indicating that different regulatory processes may be used to influence different outcomes. Unlike emotion suppression, reappraisal may be useful in modifying emotions over an extended period of time and

therefore have longer-term benefits on emotions similar to cognitive restructuring strategies used in cognitive therapies (e.g., Beck, 1995).

As anticipated, individuals less able to suppress their emotions who experienced greater emotional arousal articulated more verbal aggression intentions compared to those who experienced less emotional arousal (Hypothesis 2b). For individuals better able to suppress their emotions the relation reversed, as those who experienced higher arousal articulated less verbal aggression intentions than those with lower emotional arousal. One possible explanation is that emotional arousal served as a cue to engage in the self-regulation strategy of emotion suppression. Therefore, individuals who were highly aroused may have worked harder at suppressing their emotions which reduced the amount with which they articulated verbal aggression intentions as the extent to which they were able to suppress emotions increased.

Contrary to hypothesis 2c, poorer self-regulation did not predict the escalation from verbal to physical aggression. Thus there may be different processes that influence the occurrence of verbal aggression and physical aggression, as well as the escalation from verbal to physical aggression. Whereas self-regulation, particularly suppression, influenced the occurrence of verbal aggression intentions, different factors were found to influence physical aggression, including trait aggressivity. Perhaps different factors altogether are related to the escalation from verbal to physical aggression, including witnessing parental aggression or a history of child abuse. These factors may lead individuals to report a greater acceptance of aggressive behaviors, and therefore establish a pattern of behavior based on these early experiences that contribute to their current behavior.

Trait Aggressivity, Past-Year Dating Aggression, and Aggression Intentions

Partial support was found for hypothesis 3a, as individuals higher in trait aggressivity articulated more physical aggression intentions than those lower in trait aggressivity. This relation, however, was not moderated by alcohol intoxication and is in contrast to previous experimental assessments of alcohol and aggression (e.g., Eckhardt & Crane, 2008; Giancola et al., 2005). Previous studies have either used the TAP or a composite variable composed of verbal, physical, and belligerent aggression intentions, and these different assessments may account for the discrepant findings. Specifically belligerence, or a statement reflecting an attempt to start an altercation by threatening or provoking (Eckhardt & Crane, 2008), may represent a general characteristic or pattern of aggressive responding that is indicative of trait aggressivity. Future research should examine the effects of trait aggressivity and alcohol intoxication on belligerence.

Past-year dating aggression and emotion suppression were related to physical aggression intentions (Hypothesis 3b). As the frequency of past-year dating aggression increased, the frequency with which physical aggression intentions were articulated decreased among those less able to suppress their emotions and increased among those better able to suppress their emotions. Although this relation between suppression and past-year dating aggression was counter to what was expected, individuals with a greater history of dating aggression may have been triggered to recall more personally relevant details regarding their own relationship conflicts during the presentation of the conflict scenario. Therefore, they may not have employed techniques to suppress their emotions, but rather responded aggressively based on a learned set of behaviors developed in their prior or current relationships.

Background, Relationship Characteristics, and Aggression Intentions

Inconsistent with study hypotheses, there were no differences in verbal or physical aggression intentions between Whites and non-Whites (Hypothesis 4a). The participants in the current study, however, were primarily college students with an average family income at or above the median household income (U.S. Census Bureau, 2009). An early theory posited to describe the ethnic differences in aggression was that the socioeconomic status of ethnic minorities leads to stressful life circumstances, which increases the likelihood of aggression (Straus & Gelles, 1990). Recent investigations have concluded that socioeconomic status is an important factor in understanding differences in partner aggression between Whites and non-Whites (Field & Caetano, 2004). Future examinations of ethnic differences in dating aggression should examine a more diverse population in terms of socioeconomic status and other related factors (e.g., urban versus rural locations).

Consistent with hypotheses, lower relationship satisfaction predicted verbal aggression intentions, especially among those who were intoxicated (Hypothesis 4b). Individuals who were less satisfied in their relationships may experience more relationship conflict than those who were more satisfied. Because of this, less satisfied individuals may have been better able to imagine themselves in the dating conflict situations, leading to greater aggression intentions. Relationship commitment, however, was unrelated to verbal and physical aggression intentions in the current study (Hypothesis 4c). Although assessing one's intentions to act aggressively is a good proxy for actual behavior (Fishbein & Ajzen, 1975), both partners may have to be present in the laboratory in order for the effects of emotional commitment to be observed.

Chapter 4: General Discussion

This dissertation represents the first known attempt to experimentally examine the behavioral intentions of dating men and women in response to a mutual aggression scenario that escalates from verbal to physical aggression. Consistent with research using similar methodology, the effects of alcohol intoxication and trait aggressivity were examined, however I was also interested in the association between the ability to self-regulate thoughts, feelings, and behavior, and verbal and physical aggression intentions. In addition, the present studies provide an initial attempt to understand the factors associated with a possible escalation from verbal to physical aggression during dating conflict.

A Mutual Aggression Audio-Taped Conflict Scenario

The newly developed mutual aggression scenario was modeled after Johnson's (1995; p. 285) description of "common couple violence," and depicted a conflict that escalated from verbal to mild physical aggression by both dating partners. As mutual aggression is the predominant pattern of dating aggression (Gray & Foshee, 1997; Whitaker et al., 2007), it is important to investigate and understand the processes that underlie the escalation from verbal to physical aggression. Previously used hypothetical scenarios have portrayed the male partner observing his female partner flirting with another man, and have primarily assessed men's responses. The mutual aggression scenario, however, was designed to assess the thoughts, feelings, and behavioral responses of both men and women in response to a confrontation or conflict following a jealousy-provoking situation in which both partners were participants. This was needed

in order to better understand the factors that influence mutual aggression and the possible escalation from verbal to physical aggression.

The scenario was found to have construct validity as individuals with past-year dating aggression articulated more verbal and physical aggression intentions to the mutual aggression conflict scenario compared to those without past-year dating aggression. In addition, participants rated the scenario as believable, and it elicited increases in negative mood states such as hostility and anxiety, and decreases in positive mood states such as friendliness. Despite the advantages of the mutual aggression conflict scenario, physical aggression intentions were articulated at a low frequency. This is not consistent with previous research in which participants have responded with physical aggression to assessments such as the TAP (e.g., Giancola, 2003; Giancola et al., 2005), and other scenarios presented with the ATSS procedure (e.g., Eckhardt, 2007; Eckhardt & Crane, 2008), and may be related to the relative severity of the behavior portrayed in the new mutual aggression scenario.

When the conflict escalated to mild physical aggression, participants may have been shocked at the severity of the argument, leading many participants to make comments about how the argument had gone too far (e.g., "Now this is just getting way out of hand," "I think this argument has gotten way out of control," "These segments are sobering."). Participants were also likely to indicate that they would leave the situation (e.g., "I would walk away, this is getting too heated," "I would leave and try to talk about it in the morning"), or that the relationship was unhealthy and should end (e.g., "The girl needs to get out of this," "This relationship needs to be over."). Therefore, participants may have been more likely to articulate ways in which they would keep themselves safe

and prevent further escalation in a similar situation rather than indicate that they would engage in additional physical aggression.

For participants with a history of dating aggression, observing the conflict scenario from a bystander's point of view may have allowed them to engage in a process of perspective-taking that they are unable to do during their own relationship conflict (Johnson, 1975). This was evident in responses in which participants indicated that the verbally aggressive behavior was bad and would lead to negative consequences (e.g., "My boyfriend and I have gotten in to fights like this, and it's not good. Saying mean things just leads to like more mean things, and, um, neither one of us is happy in the end."). Additionally, this perspective-taking may have led some participants to potentially down-play the aggressive behaviors that have occurred in their own relationship (e.g., "I admit that I've sometimes gotten a little bit too angry and like thrown things, but not directly at him. Just like, if it's his stuff I would probably throw it and push it out of my way because I didn't want to see it.").

Support for Three Models of Alcohol and Dating Aggression

Three primary conceptual models have been posited to explain the observed relation between alcohol use and partner aggression: (a) the proximal effects model, (b) the indirect effects model, and (c) the spurious model (Leonard & Quigley, 1999). According to the proximal effects model, alcohol consumption is viewed as contributing directly to episodes of partner aggression. Therefore, individuals are more likely to engage in partner aggression after they consume alcohol because of the pharmacological effects of intoxication (e.g., Chermack & Taylor, 1995), as well as the expectancy that drinking will lead to aggression (Critchlow, 1983). I found support for both the pharmacology and expectancy effects of alcohol for verbal aggression intentions but not

for physical aggression, suggesting that the proximal effects model may be more relevant to verbal aggression among dating partners than physical aggression.

In the indirect effects model, alcohol consumption is thought to lead to other variables that then contribute to partner aggression. For example, alcohol consumption has been implicated in relationship dissatisfaction (Kelly & Halford, 2006), which in turn has been associated with the occurrence of aggression in these unhappy relationships (O'Leary et al., 1994). Although I did not examine the long-term effects of alcohol abuse on relationship satisfaction, the short-term effects of alcohol intoxication among those with lower relationship satisfaction were associated with verbal but not physical aggression intentions. This suggests that the indirect effects model may also be a useful construct to help explain the association between alcohol and verbal dating aggression.

In the spurious model, alcohol use and partner aggression are related because they are both associated with a third variable. Therefore, the influence of alcohol on aggression may appear to be direct when, in fact, it is not. For example, many young adults have a tendency to drink heavily and some also have a tendency to be aggressive, and it could be concluded that heavy drinking leads to aggression. It may be, however, that traits or prior aggression may be related to both the tendency to drink as well as to act aggressively. In the current investigation, both trait aggressivity as well as a history of dating aggression were related to the occurrence of physical aggression intentions, but not verbal aggression intentions. Moreover, physical aggression, trait aggressivity, and prior dating aggression have been related to heavy drinking (e.g., Eaton, Davis, Barrios, Brener, & Noonan, 2007; Heyman, O'Leary & Jouriles, 1995; Roudsari et al., 2009), lending support to the spurious model for alcohol and physical dating aggression.

The current results therefore suggest that multiple models may be necessary in explaining the role of alcohol in dating aggression. Specifically, the relation between alcohol and verbal dating aggression may fit both the proximal effects and indirect effects models, whereas the spurious model may best explain alcohol's association with physical dating aggression. Previous studies using a similar methodology to that of the current studies have combined verbal, physical, and often belligerent intentions into a composite aggression intentions variable; therefore conclusions that were drawn may have resulted from the influence of one form of aggressive behavior over another. It may be important in future research to examine the different forms of aggression separately to better understand the factors that are associated with their occurrence as well as to better inform clinical interventions used to address aggressive behaviors.

The Role of Self-Regulation in Aggression

The relation between self-regulation and aggression may vary depending on the type of regulatory process investigated as well as the immediacy with which participants are expected to respond. Individuals less able to suppress their emotions may exhibit more aggressive behaviors, especially when they are asked to respond immediately and they expect to have consumed alcohol. Because emotion suppression involves a modification of one's emotional experience during an emotionally provoking situation (John & Gross, 2004), this may be a more useful regulatory technique for responding to conflict in the moment. Cognitive reappraisal, however, involves a modification of one's thoughts regarding an emotionally laden situation (John & Gross, 2004), and may require more energy or effort than is possible during a conflict situation. Cognitive reappraisal may be most useful when the partners are able to take a break to calm down, providing the time to engage in cognitive strategies to alter their thought processes, and has been

associated with longer-term benefits including better interpersonal functioning (Gross & John, 2003). The current assessment of aggression intentions, however, required that the participants respond rather immediately to the potentially distressing scenario. It may be no surprise, therefore, that those better able to engage in emotion suppression, a regulatory approach that can provide a more immediate change in response, were less likely to articulate verbal aggression intentions.

Although those better able to suppress their emotions were less likely to articulate aggression intentions during the more immediate assessment of aggression, there may be consequences of continued emotion suppression due to the depletion of self-regulatory resources (John & Gross, 2004). The ability to self-regulate increases and decreases across time and situations, and is thought to operate like a limited resource that can be temporarily depleted (Muraven & Baumeister, 2000). The depletion of self-regulation has been shown to occur following prior attempts to self-regulate or during periods of emotional distress (Tice, Bratslavsky, & Baumeister, 2001), and has been associated with an increase in the likelihood of aggressive behavior (DeWall et al., 2007; Stucke & Baumeister, 2006). Therefore, the extent to which an individual's ability to self-regulate was depleted throughout the course of a conflict may be related to the escalation from verbal to physical aggression rather than one's overall ability to self-regulate. In the current study, neither reappraisal nor suppression were related to the escalation from verbal to physical aggression intentions, however these assessments were only administered once at the beginning of the laboratory session. It may have been that differences in overall abilities to reappraise and suppress in combination with the extent to which these strategies were employed (possibly resulting in depletion) is more predictive of escalating aggression during a conflict.

LIMITATIONS AND FUTURE DIRECTIONS

Several limitations of the current studies should be noted and addressed in future investigations. One of the limitations is that a low frequency of physical aggression intentions was observed. Given that alcohol intoxication was not related to the occurrence of physical aggression intentions in Study 2, it may be that the moderate BACs targeted and achieved (i.e., .08%) were not high enough to influence physical aggression intentions within a laboratory setting. The large number of drinks reportedly consumed prior to incidents of naturally occurring physical aggression suggests that this behavior may be most likely to occur at much higher BACs than were achieved in the current study (e.g., Wells et al., 2008). In addition, investigations that have successfully elicited physical aggression using the TAP have targeted BACs of .10% (Giancaola, 2003; Giancola et al., 2005), therefore future research examining alcohol's role in physical dating aggression should also target higher BACs.

Another possible explanation for the low rates of physical aggression intentions was that the severity of the conflict led participants to engage in perspective-taking or to articulate non-aggressive responses aimed at ensuring the safety of both partners. Several changes could be made to the scenario as well as the ATSS coding procedures in order to address these concerns. The scenario could be modified so that the conflict escalates to physical aggression during the last segment as opposed to earlier in the scenario. This would still allow for an examination of the factors associated with participants' responses to physical aggression while minimizing the length of time over which physical aggression occurs. In addition, participants' responses could be coded for adaptive, healthy responses to dating conflict in order to examine the factors associated with engaging in these protective strategies. Most research on partner aggression addresses

the factors associated with its occurrence, but equally important are the behaviors in which dating partners engage to prevent aggression from occurring in their relationship.

Because only a single assessment of self-regulation was used in this investigation, the extent to which individuals employed reappraisal or suppression strategies throughout the presentation of the conflict scenario was not assessed. These attempts may lead to a depletion of self-regulation resources and possible increases in aggression, therefore future research should assess participants' attempts to self-regulate throughout the conflict scenario and could be assessed using a modified version of the ATSS procedure. For example, participants could be provided with two separate 20 second prompts rather than the single 30 second prompt between segments. The first would prompt participants to describe the thoughts and feelings they had in response to the segment as well as any attempts to reduce or alter their thoughts or feelings. The second prompt would ask participants to describe what they would say or do if they were in that situation. By adding more specific prompts, the benefits of the ATSS procedure could be maintained, while allowing a more detailed assessment of the experienced emotions and regulation strategies that were used. Additionally, physiological measures such as heart rate variability (HRV) could be included as HRV has been associated with self-regulatory strength (Segerstrom & Nes, 2007).

A general measure of emotional arousal was used and could have been comprised of a variety of emotions. Moreover, the stimulant effects of alcohol intoxication could have been tapped by this general measure of arousal and could have confounded the effects of arousal on aggression intentions among those who were given alcohol. Although participants' mood states were assessed immediately before and after the presentation of the audio-taped scenarios, it was not possible to determine the effect of

specific emotions. Because anger in particular has been implicated in the occurrence of partner aggression (Berkowitz, 1993; Holtzworth-Munroe & Clements, 2007), future investigations should attempt to examine the effects of specific emotions on verbal and physical aggression. The modified ATSS procedures previously suggested would allow for an examination of the specific emotions experienced. In addition, a measure of skin conductance, or sympathetic activity, could also be included to provide a more objective measure of the valence and intensity of experienced emotions (e.g., Rochman & Diamond, 2008).

Lastly, due to the limitations of experimental investigations, intentions to act aggressively were assessed and not actual aggressive behavior. Although behavioral intentions have been found to be a proxy for actual behavior, future studies could increase the credibility and realism of study procedures by bringing both partners of the dating couple in to the laboratory. Similar to studies that have assessed communication among married couples (Gottman, 1980; Jacobson et al., 1994; Leonard & Roberts, 1998), dating couples could discuss a problem in their relationship following a beverage administration. The conversation would be recorded and later coded for partners' communication style and verbal aggression. Following the conversation, each partner would privately view their video tape and provide responses in a manner similar to the ATSS procedure regarding their thoughts and feelings that occurred throughout the conversation as well as the regulatory processes used. Additionally, participants would be asked to indicate any behaviors (e.g., possible physical aggression intentions) they may have engaged in if this conversation had happened outside of the laboratory. This procedure may help elicit responses that are more congruent with participants' actual

behavior in their current relationship and better address factors such as their relationship satisfaction and emotional commitment to one's dating partner.

Limitations notwithstanding, the current dissertation furthered the understanding of the association between alcohol and dating aggression by including both men and women in dating relationships and assessing responses to a mutually aggressive conflict scenario. Overall, results suggest that the role of alcohol may differ for verbal and physical aggression, with the pharmacological and expectancy effects of alcohol more important in the occurrence of verbal aggression, whereas trait aggressivity and prior dating aggression may be more predictive of physical aggression intentions. Self-regulation, and in particular emotional suppression, may reduce the frequency of aggression during dating conflicts.

The current results provide important implications for interventions that target dating aggression and alcohol use. Efforts aimed at reducing the risk for dating aggression should also address the individual's alcohol consumption, as reducing their drinking may lead to a decrease in dating aggression (O'Farrell, Fals-Stewart, Murphy, & Murphy, 2003). In addition, interventions should help individuals build self-regulatory techniques to better handle relationship conflict, including emotion suppression and cognitive reappraisal. Learning to restructure one's cognitions regarding relationship conflict as well as practicing behavioral approaches to manage one's anger, such as self-imposed time-outs or engaging in a stress relieving activity (e.g., exercise), may have beneficial effects on the adjustment of dating relationships and serve to decrease aggression. Lastly, early identification and intervention is essential for individuals high in trait aggressivity or who have a history of dating aggression in order to prevent the pattern of continued aggression.

Appendix A: ATSS and Arousometer Instructions

"In this part of the study, we are interested in what people think and feel. When people go about their daily affairs, being with others and doing different things, they talk to themselves, or have a constant stream of thoughts or feelings which reflect their reactions to something happening around them. We are going to ask you to listen to two tapes and to imagine that you are in the situations being described. We want you to listen to these tape recorded situations and tune in to what is running through your mind, and then to say these thoughts and feelings out loud. The microphone in front of you will pick up what you say. Each tape is divided into eight parts. At the end of each part, you will hear a tone such as this [TONE] followed by a pause of 30 seconds. During these 30 seconds, we want you to say out loud what was going through your mind as you were listening to the tape. Say as much as you can until you hear another tone. Talk out loud about your thoughts, feelings, and what you would like to do in response to the scenario until you hear the next tone. That will signal that the story is about to continue. There are no right or wrong answers, so please say whatever comes to your mind. Anything you say is appropriate. The more you say the better. Imagine as clearly as you can that it is really you in each situation.

While you are listening to the audio-tapes please pay particular attention to how strong your emotions are. We would like you to indicate how strong your emotions are throughout each segment of the scenarios. The meter you see will be used to indicate your level of emotional arousal. You can move the mouse forward and backward to indicate an increase or a decrease in your emotional arousal. A 0 indicates that you are not emotionally aroused, whereas a 5 is moderate emotional arousal, and a 10 is extreme emotional arousal."

Appendix B: Audio-Taped Scenario Transcripts

NEUTRAL SCENARIO

(JD and Tori are just arriving home after being at a party earlier this evening.)

Segment 1:
JD: Did you have fun at the party tonight?
Tori: Yeah, I had a great time. Did you?
JD: Yeah, It was fun. That poker game was awesome. Max and I were thinking of starting a poker league so that we can get together and play once a week or something.
Tori: That'll be fun, although I don't see what's so great about it. So, is that what you were doing the whole time? After I finished talking to those girls from my English class I looked for you but couldn't find you.
JD: Yeah, the table was in the basement. Sorry I didn't tell you where I went.
Tori: Oh, no worries. So were you going to try to play next week because my parents are coming in to town next Wednesday and you said you were going to go to dinner with us.
JD: I haven't forgotten about that. And, we have to see when everyone can get together, but it'll probably be after dinner whatever day it is.

Segment 2:
Tori: Well, if you don't want to go to dinner with us you don't have to.
JD: No, I do. I told you that I think it'll work out.
Tori: Oh, did you hear about Jim and Katie?
JD: No, what about them?
Tori: Heather told me that they broke up. Did Jim say anything to you?
JD: No, but it didn't really come up.
Tori: Really? Did he seem upset or anything when you were with him? Heather said that Katie hasn't been leaving the apartment because she's so upset.
JD: Guys don't talk about that kind of stuff really. He didn't say anything about it either way, but I'm going to meet him at the gym tomorrow so maybe he'll say something to me then.
Tori: Try to find out what happened. Katie isn't telling anyone.
JD: Alright. If he tells me then great, but I'm not gonna question him about it.

Segment 3:
Tori: Oh, I know what I can do. I'm going to check out Katie and Jim's facebook pages.
JD: To look for what?
Tori: I don't know, just to see if either of them had updated any information or something.

JD: Oh, so you're gonna facebook stalk them.
Tori: Yea, so what? It's a good way to keep tabs on people (laughing).
JD: Haha…well did you stalk me recently? Because I changed my profile picture.
Tori: No, I didn't see that. Did you put that picture from the football game up?
JD: Yeah, I thought that was an awesome shot! That's why I made it my profile picture.
Tori: I'll check it out. Speaking of football, what are we going to do before the game this weekend? Do you know of any tailgates going on?
JD: I'll ask Max to see what they're up to, but he'll probably want to hang out at his apartment for a while before and BBQ.

Segment 4:
Tori: Do you think I could invite some of my friends over to his house?
JD: (jokingly) I don't know…are they cute? If they're cute I'm sure he'd like them.
Tori: (laughs) Yea, he's really something.
JD: Oh, you don't think they would like him?
Tori: I dunno, he just seems like a player, and they wouldn't go for that.
JD: Oh, but he's different when he really likes a girl.
Tori: I guess we'll see if any of them are even interested. Anyways, what time does the game start?
JD: I think it's later on--in the evening maybe. So, I'll probably want to go over there sometime in the afternoon. Do I still need to help your friend move that day?
Tori: I don't know. I'll have to call her, but she was looking for people with trucks that could help out. She may have to wait until the next weekend, though, depending on when she can start the new lease.

Segment 5:
Tori: Then on Sunday I was thinking that we could go see that band play downtown that we've been wanting to see for a while.
JD: That'd be awesome, just tell me when and what time.
Tori: I think I have an essay for English class due Monday morning. I'll have to try to finish it early so we can go. Do you want to say around 8 o'clock so I can have time to do it before then?
JD: Sure, whenever. It's okay if we can't go this week. I have a lot of work to do anyway. My classes are killing me this semester. I can't believe the professors assign so much reading and expect that you're actually going to have time to get it done.
Tori: Yeah, no kidding. We actually have to read a book a week for my English class. Is she crazy?
JD: I can't wait until this semester is over.

Segment 6:
JD: Are you hungry? I was thinking getting some food. McDonalds?
Tori: I'll have a little, but I probably won't each much.

JD: You said that last time and then ended up eating half my nuggets and all my fries.
Tori: (laughing) I never did such thing.
JD: (kidding) Whatever, I'll double the order..
Tori: No, just order for yourself, and I'll eat a little
JD: Alright. I'll be back in 10 minutes. Call if you change your mind.
Tori: Sure. Oh, hey, before you go will you come look at my DVD player. Remember when we were watching that movie the other night and it just stopped playing?
JD: Yea I remember that, is it still not working?
Tori: Yea, it stopped playing twice for me the next time also.
JD: Ok, I'll take a look, but you should probably take it somewhere or just buy a new one. They're not that expensive.

Segment 7:
Tori: That sucks. I wanted to watch a movie before going to bed tonight.
JD: We can go to my place and watch whatever you want.
Tori: Yeah, but aren't your roommates going to be up watching TV or playing video games?
JD: Eh, as long as they're not watching a movie, we can take the DVD player and watch it in my room.
Tori: Okay, we can do that. What movie would you want to watch?
JD: Whatever, you can pick it out. Just don't make it too painful on me. I don't think the movie place is open this late, so whatever you have. Or, we can see what my roommates have, but you probably won't want to watch any of their movies.
Tori: Let's go down stairs and see what we have here.
JD: Oh god, it looks like we'll be watching a chick flick then cuz I know that's all you girls have.
Tori: Well why don't I grab a couple from here and we can see what you guys have also and decide later.

Segment 8:
JD: Okay, so just grab a few and we can decide when we get back to my place.
Tori: Sure. But will your roommates be mad that you're not going to play video games with them and will be hanging out with me instead?
JD: It should be fine but we can play games when we get there if you're worried about it.
Tori: No, I don't want to play really. I just wanted to make sure they wouldn't be mad at you for bailing, that's all.
JD: Don't worry about them. It'll be fine.
Tori: Oh, you never went for food. Maybe now we can pick it up on the way.
JD: Yea, lets get some food and then head to my place. We can even get some food for them and use it as a bribe.
Tori: Okay, sounds good. Just give me a minute to get my stuff together and then we can go.

CONFLICT SCENARIO

(JD and Tori are just arriving home after being at a party earlier this evening.)

Segment 1:
Tori: Why are you so mad at me?
JD: We need to talk about what just happened at the party.
Tori: What do you mean "what happened at the party?"
JD: I saw you flirting with that guy.
Tori: Who?
JD: How am I supposed to know?
Tori: Are you talking about Jason? We were just talking, and maybe he was flirting with me a little. I wouldn't have been talking to him for so long if you weren't playing those stupid drinking games all night.
JD: Stupid drinking games? We were just trying to have a little fun.
Tori: Well, all I'm saying is that if you paid a little attention to me, I wouldn't have had to talk to Jason.
JD: Oh, so you're saying this is my fault now?

Segment 2:
Tori: Are we going to talk about this, or are we just going to argue?
JD: I guess that depends on whether you admit you were wrong.
Tori: Wrong? I didn't do anything wrong. You weren't paying any attention to me and he came up to talk to me.
JD: You could have talked to any of your girl friends there.
Tori: Are you trying to tell me who I can and can't talk to?
JD: All I'm saying is that if you had to talk to a guy, you didn't have to be so god damn flirtatious.
Tori: You weren't even in the same room. How do you know I was flirting?
JD: How do I know? Everyone was talking about it!
Tori: Are you kidding me? I didn't do anything wrong!

Segment 3:
JD: I heard you were acting like a whore.
Tori: (interrupting) A whore?
JD: Yeah, you were all over him.
Tori: (interrupting) Right.
JD: He was only talking to you because your boobs are hanging out of that shirt.
Tori: How dare you call me a whore? You're such a jerk. Sometimes I don't know why I'm dating you.
JD: You're dating me because no one else wants you. I'm the only one that will put up with you.
Tori: You're just jealous because you know Jason totally wanted me.
JD: Only because he knows you're a slut.

Tori: Oh god, okay, you want to talk about throwing yourself at people? What about last week when you kissed that other girl and bought her a shot when we were downtown?
JD: We've been over this before and I told you I only kissed her on the cheek! Why are you bringing this up again now???

Segment 4:
(Their voices are noticeably raised and yelling most everything now.)
Tori: I don't even want to hear you talk about my behavior when you're lucky I even talked to you after that night. And, you didn't even know her.
JD: Shut up, Tori! I already told you it was her birthday. Now I wish I had done more than just kiss her on the cheek. She was way hotter than you.
Tori: I swear, if you do, we are done. I am so sick of you right now.
JD: What are you going to do? Let me guess, you're going to start crying now and call your friends, right? Your friends don't want to hear it. No one can stand you anymore.

Segment 5:
Tori: Shut the fuck up! You piss me off so much I could…ugh!!! (he interrupts her)
JD: What? You could what? (chuckle)
Tori: I swear, I could strangle you…
JD: I'd like to see you try.
Tori: So now you're threatening me.
JD: And you weren't?
Tori: (Throws her water ON him)
JD: You bitch! Now I'm soaking wet! Why the fuck did you do that?
Tori: Oh, that's right, you and your temper.
JD: You're the one getting all crazy.

Segment 6:
Tori: That's because you act like I don't even exist. I mean you are always looking at other girls and talking to other girls. I know what's going on. I'm not stupid.
JD: Are you accusing me of cheating on you?
Tori: Well, you are a lying prick. I wouldn't be surprised if you were cheating on me.
JD: Well, I've never cheated on you before, but I might now. I'm sure I could find someone that's better in bed than you are.
Tori: How could you say something like that? You're the one with the small dick!
JD: That's not what your friend Amanda said. In fact, I might just go ahead and give her a call tonight.
Tori: Oh my god, you are such an asshole. (throws something that breaks - shattering glass sound)
JD: What are you doing?

Conflict Scenario (Continued)

Segment 7:
(Tori starts to walk away)
JD: Where do you think you're going? Get back here you bitch.
Tori: I'm leaving and you can't make me stay. I don't need to put up with this.
JD: You're not going anywhere. Get back here.
Tori: What are you going to do? (pause) Whatever. I'm out of here.
JD: Come here! (grabbing Tori and hurting her)
Tori: Stop! Let me go! You're hurting my arm!
JD: You're not going anywhere.
Tori: Seriously, let me go! That's hurting my arm! (She hits him and he yells "ow!")

Segment 8:
JD: That's it (hear him push her up against the wall and her whimpering a little)
Tori: Ow! That's enough! Let me go!
JD: You better apologize for hitting me.
(Tori pushes JD to try to get away)
JD: Don't you dare push me! You're not leaving here until we work this out!
Tori: No, we're not working anything out. Get out of my face. (Pushes him again, he falls against something that breaks)
JD: You're going to clean up this mess you've made.
Tori: Get out of my way!
(You hear a slap and then it ends)

Appendix C: Self-Report Measures

Background and Demographics

1. What is your biological sex?
   _____ a. Female
   _____ b. Male

2. What is your date of birth? __ __ / __ __ / __ __ __ __

3. What is your sexual orientation?
____ a. Heterosexual
   ____ b. Bisexual
   ____ c. Gay
   ____ d. Lesbian
   ____ e. Questioning

4. What is your race/ethnicity (mark all that apply):
   ____ a. American Indian/Alaskan Native
   ____ b. Asian
   ____ c. Black or African American
   ____ d. Hispanic or Latino(a)
   ____ e. Native Hawaiian or Other Pacific Islander
   ____ f. White or Caucasian
   ____ g. Other (please specify): _____

5. What is your current family's estimated annual income?
____ a. under $19,999
   ____ b. $20,000 - 29,999
   ____ c. $30,000 - 39,999
   ____ d. $40,000 - 49,999
   ____ e. $50,000 - 59,999
   ____ f. $60,000 - 69,999
   ____ g. $70,000 - 99,999
   ____ h. $100,000 or over

6. What is your current relationship status?
   ____ a. Not dating
   ____ b. Dating, but not exclusively
   ____ c. Dating exclusively
____ d. Engaged
____ e. Married
____ f. Other (please specify): _____

7. How long have you been in your current relationship?
   ____ a. Less than 1 month
   ____ b.1-3 months
   ____ c. 3-6 months
   ____ d. 6-12 months
   ____ e. More than 12 months

8. What is your level of emotional commitment in your current relationship?						
Casual dating, little emotional commitment			Moderate emotional commitment			Someone with whom you are engaged or intend to marry
1	2	3	4	5	6	7

BIPHASIC ALCOHOL EFFECTS SCALE (BAES)

The following adjectives describe feelings that are sometimes produced by drinking alcohol. Please rate the extent to which you are experiencing each of the following *at the present moment*.

		Not at All					Moderately					Extremely
01.	Difficulty Concentrating	0	1	2	3	4	5	6	7	8	9	10
02.	Down	0	1	2	3	4	5	6	7	8	9	10
03.	Elated	0	1	2	3	4	5	6	7	8	9	10
04.	Energized	0	1	2	3	4	5	6	7	8	9	10
05.	Excited	0	1	2	3	4	5	6	7	8	9	10
06.	Heavy Head	0	1	2	3	4	5	6	7	8	9	10
07.	Inactive	0	1	2	3	4	5	6	7	8	9	10
08.	Sedated	0	1	2	3	4	5	6	7	8	9	10
09.	Slow Thoughts	0	1	2	3	4	5	6	7	8	9	10
10.	Sluggish	0	1	2	3	4	5	6	7	8	9	10
11.	Stimulated	0	1	2	3	4	5	6	7	8	9	10
12.	Talkative	0	1	2	3	4	5	6	7	8	9	10
13.	Up	0	1	2	3	4	5	6	7	8	9	10
14.	Vigorous	0	1	2	3	4	5	6	7	8	9	10

BRIEF SELF-CONTROL SCALE (BSCS)

Using the scale provided, please indicate how much each of the following statement reflects how you TYPICALLY are:

		Not at All				Very Much
01.	I am good at resisting temptation	1	2	3	4	5
02.	I have a hard time breaking bad habits	1	2	3	4	5
03.	I am lazy	1	2	3	4	5
04.	I say inappropriate things	1	2	3	4	5
05.	I do certain things that are bad for me, if they are fun	1	2	3	4	5
06.	I refuse things that are bad for me	1	2	3	4	5
07.	I wish I had more self-discipline	1	2	3	4	5
08.	People would say that I have iron self-discipline	1	2	3	4	5
09.	Pleasure and fun sometimes keep me from getting work done	1	2	3	4	5
10.	I have trouble concentrating	1	2	3	4	5
11.	I am able to work effectively towards long-term goals	1	2	3	4	5
12.	Sometimes I can't stop myself from doing something, even if I know it is wrong	1	2	3	4	5
13.	I often act without thinking through all the alternatives	1	2	3	4	5

BUSS-PERRY AGGRESSION QUESTIONNAIRE

		Very Often Applies to Me		Sometimes Applies to Me		Never or Hardly Ever Applies to Me
01.	Once in a while I can't control my urge to strike another person.	1	2	3	4	5
02.	Given enough provocation, I may hit another person.	1	2	3	4	5
03.	If somebody hits me, I hit back.	1	2	3	4	5
04.	I get into fights a little more than the average person.	1	2	3	4	5
05.	If I have to resort to violence to protect my rights, I will.	1	2	3	4	5
06.	There are people who pushed me so far that we came to blows.	1	2	3	4	5
07.	I can think of no good reason for ever hitting a person.	1	2	3	4	5
08.	I have threatened people I know.	1	2	3	4	5
09.	I have become so mad that I have broken things.	1	2	3	4	5
10.	I tell my friends openly when I disagree with them.	1	2	3	4	5
11.	I often find myself disagreeing with people.	1	2	3	4	5
12.	When people annoy me, I may tell them what I think of them.	1	2	3	4	5
13.	I can't help getting into arguments when people disagree with me.	1	2	3	4	5
14.	My friends say that I'm somewhat argumentative.	1	2	3	4	5
15.	I flare up quickly but get over it quickly.	1	2	3	4	5
16.	When frustrated, I let my irritation show.	1	2	3	4	5
17.	I sometimes feel like a posed keg ready to explode.	1	2	3	4	5
18.	I am an even-tempered person.	1	2	3	4	5
19.	Some of my friends think I'm a hothead.	1	2	3	4	5
20.	Sometimes I fly off the handle for no good reason.	1	2	3	4	5

Buss-Perry Aggression Questionnaire (Continued)

		Very Often Applies to Me		Sometimes Applies to Me		Never or Hardly Ever Applies to Me
21.	I have trouble controlling my temper.	1	2	3	4	5
22.	I am sometimes eaten up with jealousy.	1	2	3	4	5
23.	At times I feel I have gotten a raw deal out of life.	1	2	3	4	5
24.	Other people always seem to get the breaks.	1	2	3	4	5
25.	I wonder why sometimes I feel so bitter about things.	1	2	3	4	5
26.	I know that "friends" talk about me behind my back.	1	2	3	4	5
27.	I am suspicious of overly friendly strangers.	1	2	3	4	5
28.	I sometimes feel that people are laughing at me behind my back.	1	2	3	4	5
29.	When people are especially nice, I wonder what they want.	1	2	3	4	5

CONFLICT TACTICS SCALE-REVISED (CTS-2)

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired, or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might have happened when you had differences. Please circle how many times you did these things and how many times your partner did these things to you in the last 12 months.

How often did this happen?
1 = Once in the past year
2 = Twice in the past year
3 = 3-5 times in the past year
4 = 6-10 times in the past year
5 = 11-20 times in the past year
6 = More than 20 times in the past year
7 = Not in the past year, but it did happen before

1.	I insulted or swore at my partner.	1	2	3	4	5	6	0
2.	My partner did this to me.	1	2	3	4	5	6	0
3.	I threw something at my partner that could hurt.	1	2	3	4	5	6	0
4.	My partner did this to me.	1	2	3	4	5	6	0
5.	I twisted my partner's arm or hair.	1	2	3	4	5	6	0
6.	My partner did this to me.	1	2	3	4	5	6	0
7.	I pushed or shoved my partner.	1	2	3	4	5	6	0
8.	My partner did this to me.	1	2	3	4	5	6	0
9.	I used a knife or gun on my partner.	1	2	3	4	5	6	0
10.	My partner did this to me.	1	2	3	4	5	6	0
11.	I called my partner fat or ugly.	1	2	3	4	5	6	0
12.	My partner called me fat or ugly.	1	2	3	4	5	6	0
13.	I punched or hit my partner with something that could hurt.	1	2	3	4	5	6	0
14.	My partner did this to me.	1	2	3	4	5	6	0
15.	I destroyed something belonging to my partner.	1	2	3	4	5	6	0
16.	My partner did this to me.	1	2	3	4	5	6	0
17.	I choked my partner	1	2	3	4	5	6	0
18.	My partner did this to me.	1	2	3	4	5	6	0
19.	I shouted or yelled at my partner.	1	2	3	4	5	6	0
20.	My partner did this to me.	1	2	3	4	5	6	0

CTS-2 (Continued)

How often did this happen?
1 = Once in the past year
2 = Twice in the past year
3 = 3-5 times in the past year
4 = 6-10 times in the past year
5 = 11-20 times in the past year
6 = More than 20 times in the past year
7 = Not in the past year, but it did happen before

21.	I slammed my partner against a wall.	1	2	3	4	5	6	0
22.	My partner did this to me.	1	2	3	4	5	6	0
23.	I beat up my partner.	1	2	3	4	5	6	0
24.	My partner did this to me.	1	2	3	4	5	6	0
25.	I grabbed my partner.	1	2	3	4	5	6	0
26.	My partner did this to me.	1	2	3	4	5	6	0
27.	I stomped out of the room or house or yard during a disagreement.	1	2	3	4	5	6	0
28.	My partner did this to me.	1	2	3	4	5	6	0
29.	I slapped my partner.	1	2	3	4	5	6	0
30.	My partner did this to me.	1	2	3	4	5	6	0
31.	I burned or scalded my partner on purpose.	1	2	3	4	5	6	0
32.	My partner did this to me.	1	2	3	4	5	6	0
33.	I accused my partner of being a lousy lover.	1	2	3	4	5	6	0
34.	My partner accused me of this.	1	2	3	4	5	6	0
35.	I did something to spite my partner.	1	2	3	4	5	6	0
36.	My partner did this to me.	1	2	3	4	5	6	0
37.	I threatened to hit or throw something at my partner.	1	2	3	4	5	6	0
38.	My partner did this to me.	1	2	3	4	5	6	0
39.	I kicked my partner.	1	2	3	4	5	6	0
40.	My partner did this to me.	1	2	3	4	5	6	0

DAILY DRINKING QUESTIONNAIRE (DDQ)

Think about your alcohol consumption during the past three months. For a TYPICAL WEEK, please indicate the number of alcoholic drinks you consumed each day. Please circle your answer.

M: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Tu: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
W: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Th: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
F: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Sa: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+
Su: 0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15+

EMOTION REGULATION QUESTIONNAIRE (ERQ)

We would like to ask you some questions about your emotional life, in particular, how you control (that is, regulate and manage) your emotions. We are interested in two aspects of your emotional life. One is your emotional experience, or what you feel like inside. The other is your emotional expression, or how you show your emotions in the way you talk, gesture, or behave. Although some of the following questions may seem similar to one another, they differ in important ways.

		Strongly disagree		Neutral		Strongly agree
01.	When I want to feel more *positive* (such as joy or amusement), *I change what I'm thinking about*.	1	2	3	4	5
02.	I keep my emotions to myself.	1	2	3	4	5
03.	When I want to feel less *negative* emotion (such as sadness or anger), *I change what I'm thinking about*.	1	2	3	4	5
04.	When I am feeling *positive* emotions, I am careful not to express them.	1	2	3	4	5
05.	When I'm faced with a stressful situation, I make myself *think about it* in a way that helps me stay calm.	1	2	3	4	5
06.	I control my emotions by *not expressing them*.	1	2	3	4	5
07.	When I want to feel more *positive* emotion, I *change the way I'm thinking* about the situation.	1	2	3	4	5
08.	I control my emotions by *changing the way I think* about the situation I'm in.	1	2	3	4	5
09.	When I am feeling *negative* emotions, I make sure not to express them.	1	2	3	4	5
10.	When I want to feel less *negative* emotion, I *change the way I'm thinking* about the situation.	1	2	3	4	5

EMOTIONAL SENSITIVITY RATING FORM (BLANK)

Directions: The following items ask you to make ratings about the other participant based on their emotional arousal graph. Please answer these items to the best of your ability with the information you have. Select your answer by placing an "X" in the column that best represents your impression of the other participant.

1. How emotionally sensitive do you think this person is?

Not at all sensitive	1	2	Somewhat sensitive	4	5	Very sensitive

2. How stable do you think this person is?

Not at all stable	1	2	Somewhat stable	4	5	Very stable

3. How likely is this person to become aggressive?

Not at all likely	1	2	Somewhat likely	4	5	Very likely

4. How similar is this person to someone you might date?

Not at all similar	1	2	Somewhat likely	4	5	Very similar

5. Please provide a brief description of your impression of the other participant's emotional sensitivity based on their emotional arousal graph in the space provided below:

_____
_____
_____
_____
_____

EMOTIONAL SENSITIVITY RATING FORM (FROM FICTITIOUS PARTICIPANT)

1. How emotionally sensitive do you think this person is?

Not at all sensitive	1	2	Somewhat sensitive	4	5	Very sensitive
X						

2. How stable do you think this person is?

Not at all stable	1	2	Somewhat stable	4	5	Very unstable
						X

3. How likely is this person to become aggressive?

Not at all likely	1	2	Somewhat likely	4	5	Very likely
						X

4. How similar is this person to someone you might date?

Not at all similar	1	2	Somewhat likely	4	5	Very similar
X						

5. Please provide a brief description of your impression of the other participant's emotional sensitivity based on their emotional arousal graph in the space provided below:

I was surprised when I saw [insert name]'s emotional arousal graph. She seems like the kind of person that may be overly sensitive about things and probably takes offense easily. She also seems like she isn't able to handle her feelings when faced with difficult situations. I would bet that she is really unstable too. I think she has a hard time in relationships, and definitely wouldn't be the kind of person I'd want to date.

MANIPULATION CHECKS

Beverage Manipulation Check

Please estimate the number of standard alcohol beverages you were served during this experiment? (1 Standard Drink = 1 shot of liquor) _____

Hot Sauce Manipulation Check

Did you believe another participant was in the lab? YES NO (explain):
_____
_____

Did you believe the feedback was from another participant? YES NO (explain):
_____
_____

Positive Mood Manipulation Check

For each continuum presented below, please indicate the status of your current mood.

1. How happy or sad do you currently feel?

1	2	3	4	5	6
Happy					Sad

2. How good or bad do you currently feel?

1	2	3	4	5	6
Good					Bad

3. How angry or calm do you currently feel?

1	2	3	4	5	6
Angry					Calm

Stimulus Manipulation Check

Please answer the following questions regarding your experience listening to the scenario.

1. How realistic is this scenario?

1	2	3	4	5
Not at all		Somewhat		Extremely

2. How believable is this scenario?

1	2	3	4	5
Not at all		Somewhat		Extremely

3. How serious is this conflict?

1	2	3	4	5
Not at all		Somewhat		Extremely

4. How severe is this conflict?

1	2	3	4	5
Not at all		Somewhat		Extremely

5. To what extent does this conflict involve jealousy?

1	2	3	4	5
Not at all		Somewhat		Extremely

6. To what extent were you able to imagine yourself as the character in the scenario?

1	2	3	4	5
Not at all		Somewhat		Very much

7. How much did you identify with the MALE character in the scenario?

1	2	3	4	5
Not at all		Somewhat		Very much

8. How much did you identify with the FEMALE character in the scenario?

1	2	3	4	5
Not at all		Somewhat		Very much

9. How much were you distressed by the MALE character in the scenario?

1	2	3	4	5
Not at all		Somewhat		Very much

10. How much were you distressed by the FEMALE character in the scenario?

1	2	3	4	5
Not at all		Somewhat		Very much

PROFILE OF MOOD STATES (POMS)

Below is a list of words that describe feelings people have. Please read each one carefully. Then circle the number of the answer to the right which best describes HOW YOU FEEL NOW.

	Not at all	A little	Moderately	Quite a bit	Extremely
Furious	1	2	3	4	5
Friendly	1	2	3	4	5
Energetic	1	2	3	4	5
Unable to concentrate	1	2	3	4	5
On edge	1	2	3	4	5
Cooperative	1	2	3	4	5
Tired	1	2	3	4	5
Unable to think clearly	1	2	3	4	5
Grouchy	1	2	3	4	5
Forgetful	1	2	3	4	5
Cheerful	1	2	3	4	5
Ready to fight	1	2	3	4	5
Worthless	1	2	3	4	5
Angry	1	2	3	4	5
Tense	1	2	3	4	5
Unhappy	1	2	3	4	5
Confused	1	2	3	4	5
Nervous	1	2	3	4	5
Exhausted	1	2	3	4	5
Helpless	1	2	3	4	5
Shaky	1	2	3	4	5
Lively	1	2	3	4	5
Good-natured	1	2	3	4	5
Discouraged	1	2	3	4	5

To what extent are you experiencing the following:

Uncoordinated	1	2	3	4	5
Flushing	1	2	3	4	5
Off-balance	1	2	3	4	5
Dizziness	1	2	3	4	5
Nausea	1	2	3	4	5
Sleepiness	1	2	3	4	5
Driving ability probably impaired	1	2	3	4	5

RELATIONSHIP ADJUSTMENT SCALE (RAS)

Please answer the following questions regarding your current relationship partner.

		Not at All		Somewhat		Extremely
01.	How well does your partner meet your needs?	1	2	3	4	5
02.	In general, how satisfied are you with your relationship?	1	2	3	4	5
03.	How good is your relationship compared to most?	1	2	3	4	5
04.	How often do you wish you hadn't gotten into this relationship?	1	2	3	4	5
05.	To what extent has your relationship met your original expectations?	1	2	3	4	5
06.	How much do you love your partner?	1	2	3	4	5
07.	How many problems are there in your relationship?	1	2	3	4	5

SUBJECTIVE INTOXICATION

1. Please rate how TIPSY or BUZZED you feel right now by placing an "X" anywhere on this line:

0 | | | | | | | | | | | 25 | | | | | | | | | | | 50 | | | | | | | | | | | 75 | | | | | | | | | | | 100

Not at all Tipsy or Buzzed	Slightly Tipsy or Buzzed	Moderately Tipsy or Buzzed	Very Tipsy or Buzzed	Extremely Tipsy or Buzzed

2. Please rate how DRUNK you feel right now by placing an "X" anywhere on this line:

0 | | | | | | | | | | | 25 | | | | | | | | | | | 50 | | | | | | | | | | | 75 | | | | | | | | | | | 100

Not at all Drunk	Slightly Drunk	Moderately Drunk	Very Drunk	Extremely Drunk

TASTE RATING FORM (BLANK)

Directions: The following items ask you to rate the hot sauce you have just tasted. Please answer these items to the best of your ability. Select your answer by placing an "X" in the column that seems the most appropriate to you.

1. How much did you like the hot sauce?

0 Not at all	1	2	3 Somewhat	4	5	6 Very much

2. How spicy did you think the hot sauce was?

0 Not at all spicy	1	2	3 Somewhat spicy	4	5	6 Very spicy

3. How uncomfortable did the hot sauce make you feel?

0 Not at all uncomfortable	1	2	3 Somewhat uncomfortable	4	5	6 Very uncomfortable

4. How painful was the hot sauce to taste?

0 Not at all painful	1	2	3 Somewhat painful	4	5	6 Very painful

TASTE RATING FORM (FROM FICTITIOUS PARTICIPANT)

Directions: The following items ask you to rate the hot sauce you have just tasted. Please answer these items to the best of your ability. Select your answer by placing an "X" in the column that seems the most appropriate to you.

1. How much did you like the hot sauce?

0 Not at all	1	2	3 Somewhat	4	5	6 Very much
X						

2. How spicy did you think the hot sauce was?

0 Not at all spicy	1	2	3 Somewhat spicy	4	5	6 Very spicy
						X

3. How uncomfortable did the hot sauce make you feel?

0 Not at all uncomfortable	1	2	3 Somewhat uncomfortable	4	5	6 Very uncomfortable
					X	

4. How painful was the hot sauce to taste?

0 Not at all painful	1	2	3 Somewhat painful	4	5	6 Very painful
					X	

Appendix D: Overview of Hypotheses

Research Question	Theoretical Underpinning	Measures
1. Does alcohol intoxication contribute to verbal and physical aggression intentions	Pharmacology and Expectancy Effects of Alcohol; Self-Regulation Theory	ATSS coding, beverage conditions, ERQ Reappraisal and Suppression subscales
Hypotheses	**Participants**	**Data Analysis**
1a. Intoxicated individuals will report more verbal and physical aggression intentions across the conflict scenario than those who received placebo or no alcohol and this will be moderated by self-regulation.	Full sample (N = 144)	Generalized Estimating Equations
1b. Verbal aggression intentions will predict the occurrence of physical aggression intentions, and this will be moderated by alcohol intoxication and by self-regulation.	Full sample (N = 144)	Negative Binomial Regression
1c. Alcohol intoxication will be associated with an escalation from verbal to physical aggression intentions, an effect that will be moderated by self-regulation.	Only participants with verbal aggression (n = 79)	Logistic Regression
Research Question	**Theoretical Underpinning**	**Measures**
2. Does the ability to self-regulate thoughts, feelings, and behaviors decrease verbal and physical aggression intentions	Self-Regulation Theory	ATSS coding, Arousometer average emotional arousal, ERQ Reappraisal and Suppression subscales

Overview of Hypotheses (Continued)

Hypotheses	Participants	Data Analysis
2a. Poor self-regulation will be associated with greater emotional arousal.	Full sample (N = 144)	Linear Regression
2b. Poor self-regulation will be associated with more aggression intentions and will be moderated by emotional arousal.	Full sample (N = 144)	Negative Binomial Regression
2c. Poor self-regulation will be associated with an escalation from verbal to physical aggression intentions, an effect that will be moderated by emotional arousal.	Only participants with verbal aggression (n = 79)	Logistic Regression
Research Question	**Theoretical Underpinning**	**Measures**
3. Do trait aggressivity and prior dating aggression contribute to greater verbal and physical aggression intentions?	Trait Theory (aggressivity) Social Learning Theory (own and observed dating aggression)	ATSS coding, beverage conditions, Buss-Perry Aggression Questionnaire, Conflict Tactics Scale-Revised, ERQ Reappraisal and Suppression subscales
Hypotheses	**Participants**	**Data Analysis**
3a. Higher trait aggressivity will be associated with more verbal and physical aggression intentions and will be moderated by alcohol intoxication and by self-regulation.	Full sample (N = 144)	Negative Binomial Regression
3b. A greater frequency of past-year dating aggression will be associated with more verbal and physical aggression intentions and will be moderated by self-regulation.	Full sample (N = 144)	Negative Binomial Regression

Overview of Hypotheses (Continued)

Research Question	Theoretical Underpinning	Measures
4. Are their ethnic differences in dating aggression and do relationship characteristics contribute to aggression intentions?	Stress and Coping Theory (Satisfaction); Psychological Entrapment and Investment Model (Commitment)	ATSS coding, beverage conditions, demographics, Relationship Adjustment Scale
Hypotheses	**Participants**	**Data Analysis**
4a. Non-Whites will report more aggression intentions than Whites.	Full sample (N = 144)	Negative Binomial Regression
4b. Lower relationship satisfaction will be associated with more aggression intentions and will be moderated by alcohol intoxication.	Full sample (N = 144)	Negative Binomial Regression
4c. Greater relationship commitment will be associated with more aggression intentions and will be moderated by alcohol intoxication.	Full sample (N = 144)	Negative Binomial Regression

References

Amar, A. F., & Gennaro, S. (2005). Dating violence in college women: Associated physical injury, healthcare usage, and mental health symptoms. *Nursing Research, 54*, 235-242.

American Medical Association (1992). *Diagnostic and treatment guidelines on domestic violence* (No. AA 22:92-406 20M). Chicago: Author.

Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review in Psychology, 53*, 27-51.

Arriaga, X. B. (2002). Joking violence among highly committed individuals. *Journal of Interpersonal Violence, 17*, 591-610.

Arias, I., Samios, L., & O'Leary, K. D. (1987). Prevalence and correlates of physical aggression during courtship. *Journal of Interpersonal Violence, 2*, 82-90.

Bailey, D. S., Leonard, K. E., Cranston, J. W., & Taylor, S. P. (1983). Effects of alcohol and self-awareness on human physical aggression. *Personality and Social Psychology Bulletin, 9*, 289-295.

Baumeister, R. F. (1997). *Evil: Inside human violence and cruelty.* New York: W. H. Freeman.

Baumeister, R. F., & Bushman, B. J. (2007). Angry emotions and aggressive behaviors. In G. Steffgen, & M. Gollwitzer (Eds.), *Emotions and Aggressive Behavior*. Ashland, OH: Hogrefe & Huber Publishers.

Beck, J. S. (1995). *Cognitive Therapy: Basics and Beyond.* New York: Guilford Press.

Bègue, L., Subra, B., Arvers, P., Muller, D., Bricout, V., & Zorman, M. (2009). A message in a bottle: Extrapharmacological effects of alcohol on aggression. *Journal of Experimental Social Psychology, 45*, 137-142.

Berkowitz, L. (1993). Towards a general theory of anger and emotional aggression: Implications of the cognitive neoassociationistic perspective for the analysis of anger and other emotions. In R.S. Wyer, & T.K. Srull (Eds.), *Perspectives on Anger and Emotion. Advances in Social Cognition, Vol 6* (pp. 1-46). Hillsdale, NJ: Lawrence Earlbaum Associates.

Billingham, R. E. (1987). Courtship violence: The patterns of conflict resolution across seven levels of emotional commitment. *Family Relations, 36,* 283-289.

Brodbelt, S. (1983). College dating and aggression. *College Student Journal, 17*, 283-286.

Bushman, B. J., & Cooper, H. M. (1990). Effects of alcohol on human aggression: An integrative research review. *Psychological Bulletin, 107*, 341-354.

Buss, A. H., & Perry, M. (1992). The aggression questionnaire. *Journal of Personality and Social Psychology, 63*, 452-459.

Caetano, R., Cunradi, C. B., Clark, C. L., & Shafer, J. (2000). Intimate partner violence and drinking patterns among white, black, and Hispanic couples in the U.S. *Journal of Substance abuse, 11*, 123-138.

Caetano, R., Ramisetty-Mikler, S., & Field, C. A. (2005). Unidirectional and bidirectional intimate partner violence among White, Black, and Hispanic couples in the United States. *Violence and Victims, 20*, 393-406.

Carey, K. B., Neal, D. J., & Collins, S. E. (2004). A psychometric analysis of the self-regulation questionnaire. *Addictive Behaviors, 29*, 253-260.

Cascardi, M., O'Leary, K. D., Lawrence, E. E., & Schlee, K. (1995). Characteristics of women physically abused by their spouses and who seek treatment regarding marital conflict. *Journal of Consulting and Clinical Psychology, 63*, 616-623.

Chermack, S., & Giancola P. R. (1997). The relationship between alcohol and aggression: An integrated biopsychosocial approach. *Clinical Psychology Review, 6*, 621-649.

Chermack, S. T., & Taylor, S. P. (1995). Alcohol and human physical aggression: Pharmacological versus expectancy effects. *Journal of Studies on Alcohol, 56,* 449-456.

Ciarrochi, J., & Forgas, J. P. (2000). The pleasure of possessions: affective influences and personality in the evaluation of consumer items. *European Journal of Social Psychology, 30,* 631-649.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd edition). Hillsdale: NJ: Erlbaum.

Collins, R. L., Parks, G. A., & Marlatt, G. A. (1985). Social determinants of alcohol consumption: The effects of social interaction and model status on the self-

administration of alcohol. *Journal of Consulting and Clinical Psychology, 53*, 189-200.

Corbin, W. R., Gearhardt, A., & Fromme, K. (2008). Stimulant alcohol effects prime within session drinking behavior. *Psychopharmacology, 197*, 327-337.

Cordova, J. V., Jacobson, N. S., Gottman, J. M., Rushe, R., & Cox, G. (1993). Negative reciprocity and communication in couples with a violent husband. *Journal of Abnormal Psychology, 102*, 559-564.

Critchlow, B. (1983). Blaming the booze: The attribution of responsibility for drunken behavior. *Personality and Social Psychology Bulletin, 9*, 451-473.

Curtin, J. J., Patrick, C. J., Lang, A. R., Cacioppo, J. T., & Birbaumer, N. (2001). Alcohol affects emotion through cognition. *Psychological Science, 12*, 527-531.

Davison, G. C., Hagga, D. A. F., Rosenbaum, J., Dolezal, S. L., & Weinstein, K. A. (1991). Assessment of Self-Efficacy in Articulated Thoughts: "States of Mind" Analysis and Association with Speech-Anxious Behavior. *Journal of Cognitive Psychotherapy: An International Quarterly, 5*, 84-90.

Davison, G. C., Robins, C., & Johnson, M. K. (1983). Articulated Thoughts During Simulated Situations: A Paradigm for Studying Cognition in Emotion and Behavior. *Cognitive Therapy and Research, 7*, 17-40.

Davison, G. C., Vogel, R., & Coffman, S. (1997). Think-aloud approaches to cognitive assessment and the articulated thoughts in simulated situations paradigm. *Journal of Consulting and Clinical Psychology, 65*, 950-958.

Denson, T. F., White, A. J., & Warburton, W. A. (2009). Trait displaced aggression and psychopathy differentially moderate the effects of acute alcohol intoxication and rumination on triggered displaced aggression. *Journal of Research in Personality, 43*, 673-681.

Derman, K. H., & George, W. H. (1989). Alcohol expectancy and the relationship between drinking and physical aggression. *Journal of Psychology: Interdisciplinary and Applied, 123*, 153-161.

DeWall, C. N., Baumeister, R. F., Stillman, T. F., & Gailliot, M. T. (2007). Violence restrained: Effects of self-regulation and its depletion on aggression. *Journal of Experimental Social Psychology, 43*, 62-76.

Dye, M. L., & Eckhardt, C. I. (2000). Anger, irrational beliefs, and dysfunctional attitudes in violent dating relationships. *Violence and Victims, 15*, 337-350.

Eaton, D. K., Davis, K. S., Barrios, L., Brener, N. D., & Noonan, R. K. (2007). Associations of dating violence victimization with lifetime participation, co-occurrence, and early initiation of risk behaviors among U.S. high school students. *Journal of Interpersonal Violence, 22*, 585-602.

Eckhardt, C. I. (2007). Effects of alcohol intoxication on anger experience and expression among partner assaultive men. *Journal of Consulting and Clinical Psychology, 75*, 61-71.

Eckhardt, C. I., Barbour, K. A., & Stuart, G. L. (1997). Anger and hostility in maritally violent men: Conceptual distinctions, measurement issues, and literature review. *Clinical Psychology Review, 17*, 333-358.

Eckhardt, C. I., & Crane, C. (2008). Effects of alcohol intoxication and aggressivity on aggressive verbalizations during anger arousal. *Aggressive Behavior, 34*, 428-436.

Eckhardt, C. I., & Dye, M. L. (2000). The cognitive characteristics of martially violent men: Theory and evidence. *Cognitive Therapy and Research, 24*, 139-158.

Eckhardt, C. I., & Jamison, T. R. (2002). Articulated thoughts of male perpetrators of dating violence during anger arousal. *Cognitive Therapy and Research, 26*, 289-308.

Eckhardt, C., Jamison, T. R., & Watts, K. (2002). Anger experience and expression among male dating violence perpetrators during anger arousal. *Journal of Interpersonal Violence, 17*, 1102-1114.

Evers, C., Fischer, A. H., Rodriguez Mosquera, P. M., & Manstead, A. S. R. (2005). Anger and social appraisal: A "spicy" sex difference? *Emotion, 5*, 258-266.

Faul, F., & Erdfelder, E. (1992). GPOWER: A priori, post-hoc, and compromise power analyses for MS-DOS [Computer program]. Bonn, FRG: Bonn University, Department of Psychology.

Field, C. A., & Caetano, R. (2004). Ethnic differences in intimate partner violence in the U.S. general population: The role of alcohol use and socioeconomic status. *Trauma, Violence, & Abuse, 5*, 303-317.

Finkel, E. J. (2007). Impelling and inhibiting forces in the perpetration of intimate partner violence. *Review of General Psychology, 11*, 193-207.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Forgas, J. P. (2002). Feeling and doing: Affective influences on interpersonal behavior. *Psychological Inquiry, 13*, 1-28.

Fossos, N., Neighbors, C., Kaysen, D., & Hove, M. C. (2007). Intimate partner violence perpetration and problem drinking among college students: The roles of expectancies and subjective evaluations of alcohol aggression. *Journal of Studies on Alcohol and Drugs, 68*, 706-713.

Fromme, K., D'Amico, E. J., & Katz, E. C. (1999). Intoxicated sexual risk taking: An expectancy or cognitive impairment explanation? *Journal of Studies on Alcohol, 60*, 54-63.

Fromme, K., Katz, E. C., & D'Amico, E. J. (1997). Effects of alcohol intoxication on the perceived consequences of risk taking. *Experimental and Clinical Psychopharmacology, 5*, 14-23.

Gabrielli, W. F., Jr., Nagoshi, C. T., Rhea, S. A., & Wilson, J. R. Anticipated and subjective sensitivities to alcohol. *Journal of Studies on Alcohol, 52*, 205-214.

Garber, J. & Dodge, K. A. (1991). *The development of emotion regulation and dysregulation*. New York, NY: Cambridge University Press.

Giancola, P. R. (2000). Executive functioning: A conceptual framework for alcohol-related aggression. *Experimental and Clinical Psychopharmacology, 8*, 576-594.

Giancola, P. R. (2002). Alcohol-related aggression in men and women: The influence of dispositional aggressivity. *Journal of Studies on Alcohol, 63*, 696-708.

Giancola, P. R. (2003). The moderating effects of dispositional empathy and alcohol-related aggression in men and women. *Journal of Abnormal Psychology, 112*, 275-281.

Giancola, P. R., Godlaski, A. J., & Parrott, D. J. (2005). "So I can't blame the booze?": Dispositional aggressivity negates the moderating effects of expectancies on alcohol-related aggression. *Journal of Studies on Alcohol, 66*, 815-824.

Giancola, P. R., Parrott, D. J., & Roth, R. M. (2006). The influence of difficult temperament on alcohol-related aggression: Better accounted for by executive functioning? *Addictive Behaviors, 31*, 2169-2187.

Giancola, P. R., & Zeichner, A. (1997). The biphasic effects of alcohol on human physical aggression. *Journal of Abnormal Psychology, 106*, 598-607.

Goldsmith, H. H., & Davidson, R. J. (2004). Disambiguating the components of emotion regulation. *Child Development, 75*, 361-365.

Gottman, J. M. (1980). Consistency of nonverbal affect and affect reciprocity in marital interaction. *Journal of Consulting and Clinical Psychology, 48*, 711-717.

Gottman, J. M (1994). *What predicts divorce? The relationship between marital processes and marital outcomes*. Hillsdale, NJ: Lawrence Earlbaum Associates.

Gray, H. M., & Foshee, V. (1997). Adolescent dating violence: Differences between one-sided and mutually violence profiles. *Journal of Interpersonal Violence, 12*, 126-141.

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74*, 1464-1480.

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*, 197-216.

Gross, J. J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology, 74*, 224-237.

Gross, J. J. (1999). Emotion regulation: Past, present, future. *Cognition and Emotion, 13,* 551-573.

Gross, J. J., & John, O. P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships and well-being. *Journal of Personality and Social Psychology, 85*, 348-362.

Hardin, J. W., & Hilbe, J. M. (2003). *Generalized estimating equations*. Boca Raton, FL: Chapman & Hall/CRC

Hendrick, S. S. (1988). A generic measure of relationship satisfaction. *Journal of Marriage and the Family, 50*, 93-98.

Heyman, R. E., O'Leary, K. D., & Jouriles, E. N. (1995). Alcohol and aggressive personality styles: Potentiators of serious physical aggression against wives? *Journal of Family Psychology, 9*, 44-57.

Hines, D. A., & Saudino, K. J. (2003). Gender differences in psychological, physical, and sexual aggression among college students using the Revised Conflict Tactics Scales. *Violence and Victims, 18*, 197-214.

Hines, D. A., & Straus, M. A. (2007). Binge drinking and violence against dating partners: The mediating effect of antisocial traits and behaviors in a multinational perspective. *Aggressive Behavior, 33*, 441-457.

Holdstock, L., & de Wit, H. (1998). Individual differences in the biphasic effects of ethanol. *Alcoholism: Clinical and Experimental Research, 22*, 1903-1922.

Holtzworth-Munroe, A., & Clements, K. (2007). The association between anger and male perpetration of intimate-partner violence. In T.A. Cavell & K.T. Malcolm (Eds.), *Anger, Aggression, and Interventions for Interpersonal Violence.* Mahwah, NJ: Lawrence Erlbaum Associates.

Holtzworth-Munroe, A. & Hutchinson, G. (1993). Attributing negative intent to wife behavior: The attributions of martially violent versus nonviolent men. *Journal of Abnormal Psychology, 102*, 206-211.

Jackson, S. M. (1999). Issues in the dating violence research: A review of the literature. *Aggression and Violent Behavior, 4*, 233-247.

Jacobson, N. S., Gottman, J. M., Waltz, J., Rushe, R., Babcock, J., & Holtzworth-Munroe, A. (1994). Affect, verbal content, and psychophysiology in the arguments of couples with a violent husband. *Journal of Consulting and Clinical Psychology, 62*, 982-988.

Jenkins, S. S., & Aubé, J. (2002). Gender differences and gender-related constructs in dating aggression. *Personality and Social Psychology Bulletin, 28*, 1106-1117.

John, O. P., & Gross, J. J. (2004). Health and unhealthy emotion regulation: Personality processes, individual differences and life span development. *Journal of Personality, 72*, 1301-1334.

Johnson, D. W. (1975). Cooperativeness and social perspective taking. *Journal of Personality and Social Psychology, 31*, 241-244.

Johnson, M. P. (1995). Patriarchal terrorism and common couple violence: Two forms of violence against women. *Journal of Marriage and the Family, 57*, 283-294.

Kelly, A. B., & Halford, W. K. (2006). Verbal and physical aggression in couples where the female partner is drinking heavily. *Journal of Family Violence, 21*, 11-17.

Klinesmith, J., Kasser, T., & McAndrew, F. T. (2006). Guns, testosterone, and aggression: An experimental test of a meditational hypothesis. *Psychological Science, 17*, 568-571.

Laner, M. R. (1983). Courtship abuse and aggression: Contextual aspects. *Sociological Spectrum, 3*, 69-83.

Leeman, R. F., Corbin, W. R., & Fromme, K. (2009). Craving predicts within session drinking behavior following placebo. *Personality and Individual Differences, 46*, 693-698.

Leonard, K. E., & Quigley, B. M. (1999). Drinking and marital aggression in newlyweds: An event-based analysis of drinking and the occurrence of husband marital aggression. *Journal of Studies on Alcohol, 60*, 537-545.

Leonard, K. E., & Roberts L. J. (1998). The effects of alcohol on the marital interactions of aggressive and nonaggressive husbands and their wives. *Journal of Abnormal Psychology, 107*, 602-615.

Leonard, K. E., & Senchak, M. (1993). Alcohol and premarital aggression among newlywed couples. *Journal of Studies on Alcohol*, (Suppl.11), 96-108.

Leonard, K. E., & Senchak, M. (1996). Prospective prediction of husband marital aggression within newlywed couples. *Journal of Abnormal Psychology, 105*, 369-380.

Lewis, S. F., & Fremouw, W. (2001). Dating violence: A critical review of the literature. *Clinical Psychology Review, 21*, 105-127.

Lieberman, J. D., Solomon, S., & Greenberg, J. (1999). A hot new way to measure aggression: Hot sauce allocation. *Aggressive Behavior, 25*, 331-348.

Lundeberg, K., Stith, S. M., Penn, C. E., & Ward, D. B. (2004). A comparison of nonviolent, psychologically violent, and physically violent male college daters. *Journal of Interpersonal Violence, 19*, 1191-1200.

Magdol, L., Moffitt, T., Caspi, A., Newman, D., Fagan, J., & Silva, P. (1997). Gender differences in partner violence in a birth cohort of 21-year-olds: Bridging the gap between clinical and epidemiological approaches. *Journal of Consulting and Clinical Psychology, 65*, 68-78.

Margolin, G., John, R. S., & Gleberman, L. (1988). Affective responses to conflictual discussions in violent and nonviolent couples. *Journal of Consulting and Clinical Psychology, 56*, 24-33.

Margolin, G. & Wampold, B. E. (1981). Sequential analysis of conflict and accord in distressed and nondistressed marital partners. *Journal of Consulting and Clinical Psychology, 49*, 554-567.

Martin, C. S., Earleywine, M., Musty, R. E., Perrine, M. W., & Swift, (1993). Development and validation of the Biphasic Alcohol Effects Scale. *Alcoholism, Clinical and Experimental Research, 17*, 140-146.

Mauss, I. B., Evers, C., Wilhelm, F. H., & Gross, J. J. (2006). How to bite your tongue without blowing your top: Implicit evaluation of emotion regulation predicts responding to anger provocation. *Personality and Social Psychology Bulletin, 32*, 589-602.

McGregor, H. A., Lieberman, J. D., Greenberg, J., Solomon, S., Arndt, J., & Simon, L., (1998). Terror management and aggression: Evidence that mortality salience motivates aggression against worldview-threatening others. *Journal of Personality and Social Psychology, 74*, 590-605.

Merluzzi, T. V., Rudy, R. E., & Glass, C. R. (1981). The information processing paradigm. In T. V. Merluzzi, C. R. Glass, & M. Genest (Eds.), *Cognitive assessment* (pp. 77-124). New York: Guilford Press.

Miller, C. A., Parrott, D. J., & Giancola, P. R. (2009). Aggreeableness and alcohol-related aggression: The mediating effect of trait aggressivity. *Experimental and Clinical Psychopharmacology, 17*, 445-455.

Muñoz-Rivas, M. J., Graña, J. L., O'Leary, K. D., & Gonzalez, M. P. (2007). Aggression in adolescent dating relationships: Prevalence, justification, and health consequences. *Journal of Adolescent Health, 40*, 298-304.

Muraven, M., & Baumeister, R. F. (2000). Self-regulation and depletion of limited resources: Does self-control resemble a muscle? *Psychological Bulletin, 126*, 247-259.

Murphy, C. M., & O'Leary, K. D. (1989). Psychological aggression predicts physical aggression in early marriage. *Journal of Consulting and Clinical Psychology, 57*, 579-582.

National Institute on Alcohol Abuse and Alcoholism (2005). *Recommended Council Guidelines on Ethyl Alcohol Administration in Human Experimentation.* Rockville, MD: Department of Health and Human Services.

Neal, D. J., & Carey, K. B. (2005). A follow-up psychometric analysis of the self-regulation questionnaire. *Psychology of Addictive Behaviors, 19*, 414-422.

Neal, D. J., & Carey, K. B. (2007). Association between alcohol intoxication and alcohol-related problems: An event-level analysis. *Psychology of Addictive Behaviors, 21*, 194-204.

Noller, P., & Roberts, N. D. (2002). The communication of couples in violent and nonviolent relationships: Temporal associations with own and partners' anxiety/arousal and behavior. P. Noller & J. Feeney (Eds.), *Understanding Marriage: Developments in the Study of Couple Interaction* (pp. 348-378). New York, NY: Cambridge University Press.

Norris, J., & Kerr, K. L. (1993). Alcohol and violent pornography: Responses to permissive and nonpermissive cues. *Journal of Studies on Alcohol, 11*, 118-127.

O'Farrell, T. J., Fals-Stewart, W., Murphy, M., & Murphy, C. M. (2003). Partner violence before and after individually based alcoholism treatment for male alcoholic patients. *Journal of Consulting and Clinical Psychology, 71*, 92-102.

O'Leary, K. D. (1993). Through a psychological lens: Personality traits, personality disorders, and levels of violence. In R.J. Gelles & D.R. Loseke (Eds.), *Current controversies on family violence* (pp. 7-30). Newbury Park, CA: Sage.

O'Leary, K. D. (1999). Developmental and affective issues in assessing and treating partner aggression. *Clinical Psychology: Science and Practice, 6*, 400-414.

O'Leary, K. D., Malone, J., & Tyree, A. (1994). Physical aggression in early marriage: Prerelationship and relationship effects. *Journal of Consulting and Clinical Psychology, 62*, 594-602.

Parks, K. A., Hsieh, Y., Bradizz, C. M., & Romosz, A. M. (2008). Factors influencing the temporal relationship between alcohol consumption and experiences with aggression among college women. *Psychology of Addictive Behaviors, 22*, 210-218.

Parrott D. J., & Giancola, P. R. (2006). The effect of past-year heavy drinking on alcohol-related aggression. *Journal of Studies on Alcohol, 67*, 122-130.

Pedersen, P., & Thomas, C. D. (1992). Prevalence and correlates of dating violence in a Canadian university sample. *Canadian Journal of Behavioural Science, 24*, 490-501.

Quigley, B. M. & Leonard, K. E. (1999). Husband alcohol expectancies, drinking, and marital-conflict styles as predictors of severe marital violence among newlywed couples. *Psychology of Addictive Behaviors, 13*, 49-59.

Rapoza, K. A., & Baker, A. T. (2008). Attachment style, alcohol, and childhood experience of abuse: An analysis of physical violence in dating couples. *Violence and Victims, 23*, 52-65.

Rellini, A. H., McCall, K. M., Randall, P. K., & Meston, C. M. (2005). The relationship between women's subjective and physiological sexual arousal. *Psychophysiology, 42*, 116-124.

Riggs, D., O'Leary, K. D., & Breslin, F. (1990). Multiple predictors of physical aggression in dating couples. *Journal of Interpersonal Violence, 5*, 61-73.

Roberts, L. J. (2006). From Bickering to Battering: Destructive conflict processes in intimate relationships. P. Noller & J.A. Feeney (Eds.), *Close Relationships: Functions, Forms and Processes* (pp. 325-351). New York, NY: Psychology Press.

Rochman, D., & Diamond, G. M. (2008). From unresolved anger to sadness: Identifying physiological correlates. *Journal of Counseling Psychology, 55*, 96-105.

Rohsenow, D. J., & Marlatt, A. G. (1981). The balanced placebo design: Methodological considerations. *Addictive Behaviors, 6*, 107-122.

Romito, P., Turan, J. M., & De Marchi, M. (2005). The impact of current and past interpersonal violence on women's mental health. *Social Science & Medicine, 60*, 1717-1727.

Roscoe, B., & Benaske, N. (1985). Courtship violence experienced by abused wives: Similarities in patterns of abuse. *Family Relations, 34*, 419-424.

Roudsari, B. S., Leahy, M. M., & Walters, S. T. (2009). Correlates of dating violence among male and female heavy-drinking college students. *Journal of Interpersonal Violence, 24*, 1892-1905.

Ryan, K. M. (1998). The relationship between courtship violence and sexual aggression in college students. *Journal of Family Violence, 13*, 377-394.

Schafer, J., Caetano, R., & Clark, C. (1998). Rates of intimate partner violence in the United States. *American Journal of Public Health, 88*, 1702-1704.

Schumacher, J. A., Feldbau-Kohn, S., Slep, A. M. S., & Heyman, R. E. (2001). Risk factors for male-to-female partner physical abuse. *Aggression and Violent Behavior, 6*, 281-352.

Schumacher, J. A., & Leonard, K. E. (2005). Husbands' and wives' marital adjustment, verbal aggression, and physical aggression as longitudinal predictors of physical aggression in early marriage. *Journal of Consulting and Clinical Psychology, 73*, 28-37.

Segerstrom, S. C., & Nes, L. S. (2007). Heart rate variability reflects self-regulatory strength, effort, and fatigue. *Psychological Science, 18*, 275-281.

Shook, N. J., Gerrity, D. A., Jurich, J., & Segrist, A. E. (2000). Courtship violence among college students: A comparison of verbally and physically abusive couples. *Journal of Family Violence, 15*, 1-22.

Sillars, A., Roberts, L. J., Dun, T., & Leonard, K. (2002). Stepping into the stream of thought: Cognition during marital conflict. V. Manusov & J. Harvey (Eds.), *Attribution, Communication Behavior, and Close Relationships* (pp. 193-210). New York, NY: Cambridge University Press.

Silverman, J. G., Raj, A., Mucci, L. A., & Hathaway, J. E. (2001). Dating violence against adolescent girls and associated substance use, unhealthy weight control, sexual risk behavior, pregnancy, and suicidality. *Journal of the American Medical Association, 286*, 572-579.

Stappenbeck, C. A., & Fromme, K. (2010). A longitudinal investigation of heavy drinking and physical dating violence in men and women. *Addictive Behaviors, 35*, 479-485.

Stappenbeck, C. A., Kruse, M. I., & Fromme, K. (2006, June). *Verbal and physical aggression in response to hypothetical dating conflict vignettes after drinking alcohol*. Poster presented at the Annual Scientific Meeting of the Research Society on Alcoholism, Baltimore, MA.

Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: It's prized and dangerous effects. *American Psychologist, 45*, 921-933.

Stets, J. E., & Henderson, D. A. (1991). Contextual factors surrounding conflict resolution while dating: Results from a national study. *Family Relations, 40*, 29-36.

Stets, J., & Pirog-Good, M. (1989). Sexual aggression and control in dating relationships. *Journal of Applied and Social Psychology, 19*, 1392-1412.

Stith, S. M., Jester, S. B., & Bird, G. W. (1992). A typology of college students who use violence in their dating relationships. *Journal of College Student Development, 33*, 411-421.

Storaasli, R. D., & Markman, H.J . (1990). Relationship problems in the early stages of marriage: A longitudinal investigation. *Journal of Family Psychology, 4*, 80-98.

Straus, M. A., & Gelles, R. J. (1990). *Physical violence in American families: Risk factors and adaptations to violence in 8,145 families.* New Brunswick, NJ: Transaction Publishers.

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised Conflict Tactics Scale (CTS2): Development and preliminary psychometric data. *Journal of Family Issues, 17*, 283-316.

Straus, M. A., & Sweet S. (1992). Verbal/symbolic aggression in couples: Incidence rates and relationships to personal characteristics. *Journal of Marriage and Family, 54*, 346-357.

Stucke, T. S., & Baumeister, R. F. (2006). Ego depletion and aggressive behavior: Is the inhibition of aggression a limited resource? *European Journal of Social Psychology, 36*, 1-13.

Tangney, J. P., Baumeister, R. F., & Boone, A. L. (2004). High self control predicts good adjustment, less pathology, better grades, and interpersonal success. *Journal of Personality, 72*, 271-322.

Taylor, S. P. (1967). Aggressive behavior and physiological arousal as a function of provocation and the tendency to inhibit aggression. *Journal of Personality, 35*, 297-310.

Taylor, S. P., & Chermack, S. T. (1993). Alcohol, drugs, and human physical aggression. *Journal of Studies on Alcohol, Suppl 11*, 78-88.

Taylor, S. P., & Leonard, K. E. (1983). Alcohol and human aggression. In R.G. Geen & E.I. Donnerstein (Eds.), *Aggression: Theoretical and Empirical Reviews*. New York: Academic Press.

Testa, M., Quigley, B. M., & Leonard, K. E. (2003). Does alcohol make a difference? Within-participants comparison of incidents of partner violence. *Journal of Interpersonal Violence, 18*, 735-743.

Tice, D. M., Bratslavsky, E., & Baumeister, R. F. (2001). Emotional distress regulation takes precedence over impulse control: If you feel bad, do it! *Journal of Personality and Social Psychology, 80*, 53-67.

U.S. Census Bureau (2009). Current Population Reports, P60-236, *Income, Poverty, and Health Insurance Coverage in the United States: 2008.* Washington, D.C.: U.S. Government Printing Office.

Vaughn, M. J., & Baier, M. E. M. (1999). Reliability and validity of the Relationship Assessment Scale. *The American Journal of Family Therapy, 27*, 137-147.

Vohs, K. D., & Baumeister, R., F. (2004). Understanding self-regulation: An introduction. In R. F. Baumeister & K. D. Vohs (Eds.), *Handbook of Self-Regulation: Research, Theory, and Applications* (pp. 1-9). New York: Guildford Press.

Warburton, W. A., Williams, K. D., & Cairns, D. R. (2006). When ostracism leads to aggression: The moderating effects of control deprivation. *Journal of Experimental Social Psychology, 42*, 213-220.

Wells, S., Mihic, L., Tremblay, P. F., Graham, K., & Demers, A. (2008). Where, with whom, and how much alcohol is consumed on drinking events involving aggression? Event-level associations in a Canadian National Survey of university students. *Alcoholism: Clinical & Experimental Research, 32*, 522-533.

Whitaker, D. J., Haileyesus, T., Swahn, M., Saltzman, L. S. (2007). Differences in frequency of violence and reported injury between relationships with reciprocal and nonreciprocal intimate partner violence. *American Journal of Public Health, 97*, 941-947.

White, J., Davison, G. C., Hagga, D. A. F., & White, K. (1992). Cognitive bias in the articulated thoughts of depressed and nondepressed psychiatric patients. *The Journal of Nervous and Mental Disease, 180*, 77-81.

White, J., & Koss, M. (1991). Courtship violence: Incidence in a national sample of higher education students. *Violence and Victims, 6*, 247-256.

Vita

Cynthia Ann Stappenbeck was born in Utica, New York, on December 3, 1977. She is the daughter of Eric and Susan Stappenbeck, and the older sister of Cheryl Stappenbeck. After graduating from Cicero-North Syracuse High School in Cicero, New York, in 1996, she attended Niagara University in Niagara Falls, New York. She graduated magna cum laude from Niagara University with a Bachelor of Arts in Psychology in May of 2000. She then earned a Master of Arts in Psychology in May of 2002 from the University at Buffalo, The State University of New York. She was employed from 2002 to 2004 as a project coordinator at the Research Institute on Addictions in Buffalo, New York. In August 2004, she returned to graduate school to pursue a doctoral degree in clinical psychology at the University of Texas at Austin in Austin, Texas. During the academic year of 2010-2011, she will complete a pre-doctoral clinical internship at the VA Puget Sound Seattle in Seattle, Washington.

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